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Moore

HEADQUARTERS II CORPS
APO 19 U.S. ARMY

In the Field
16 June 1944

353/91 (CG)

Subject: Lessons Learned.

To : Divisions and Separate Unit Commanders, II Corps.

1. A detailed analysis of lessons learned during the II Corps advance from the GARIGLIANO to ROME is being made. This study will be published at an early date. Rather than wait for the publication of the detailed compilation, I wish to give you my comments now so they can be acted upon during the present training period.

a. Towns must be taken from deep flank and rear.

b. The usual practice of battering towns with air and artillery serves little purpose and is extremely wasteful of ammunition and time.

c. The delay caused us by small enemy detachments is out of all proportion to the numbers and means at our disposal. Among other errors committed is our failure to leave roads soon enough and to make a wide enough envelopment or by-pass.

d. The combined use of armored and infantry units has been too cautious. The over-emphasis placed on fire power of tanks during the period when weather and terrain conditions prevented full use of armor has not been overcome and mobility has not been restored to its proper importance in the employment of tanks. Too often a column of tanks has remained inactive on a road, held up by a single SP or AT gun. The time lost waiting for infantry to arrive, deploy and attack the gun could have been reduced 50% or more by a rapid deployment and movement of the tanks or by a wide envelopment which would in most cases have resulted in the capture or destruction of the gun. Likewise, relatively large groups of infantry have been long delayed by a small enemy group with a machine gun or two astride a road. Again, the time wasted waiting for the arrival and action of tanks could have been materially reduced by early and wide deployment.

e. Not enough use has been made of Air OP's for reconnaissance purposes. Inasmuch as artillery targets have been relatively few during this pursuit phase, there should have been constant Cub air reconnaissance available to all leading elements.

f. In the long run, speed was made over the high ground, not over the roads or flat lands.

g. Too often commanders of all echelons waited for orders. The rapid advance made the maintenance of communications difficult and resulted in instructions being issued and received based on out of date information. Under such conditions commanders must act on their own responsibility, initiative and judgment. Inactivity is inexcusable.

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2. We must be prepared mentally and tactically for a change in the character of combat when we next go into the line for we may encounter strong and bitter resistance. At some date or place the German may seek to make a stand but our constant pressure should greatly hamper him from getting set. The main bodies following our mobile advance detachments must be kept so in hand that they can be employed rapidly in accordance with simple and prepared plans.

3. Speed, not haste, is still the great factor.

GEOFFREY KEYES,
Major General, U.S.A.,
Commanding.

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16 June 1944: 200

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HEADQUARTERS FIFTH ARMY
A. P. O. #464, U. S. Army

AG 334-Y

8 October 1944

SUBJECT: Lessons Learned in Combat by 34th Infantry Division.

TO : See Distribution.

1. "Lessons Learned in Combat, November 7-8 1942 to September 1944", published by Headquarters 34th Infantry Division, is hereby forwarded for your information and interest.

2. It should be understood that the views expressed in this document, though interesting, do not necessarily represent an official sanction by this Headquarters of the principles or doctrines outlined therein.

By command of Lieutenant General CLARK:

Edward J. McAllister

EDWARD J. McALLISTER
1st Lt., A. G. D.
Asst. Adjutant General.

1 Incl:
Incl #1-Lessons Learned in Combat 34 Inf Div.

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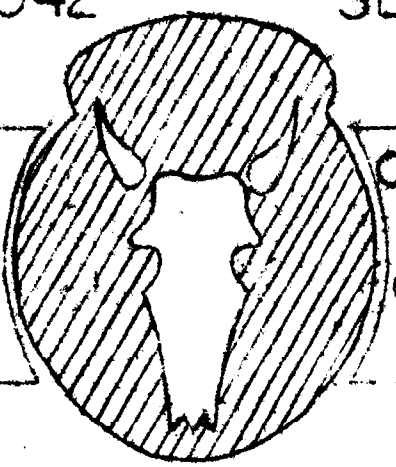
LESSONS LEARNED

IN

COMBAT

NOVEMBER 7-8, 1942 — SEPTEMBER 1944

ALGIERS - FONDOUK
HILL 609 BENEVENTO
VOLTURNO RIVER
MT PANTANO



CASSINO-ANZIO-ROME
CIVITAVECCHIA
CECINA-ROSIGNANO
LIVORNO

HEADQUARTERS
34th INFANTRY DIVISION
APO 34 US ARMY

SEPTEMBER 1944 ITALY

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LESSONS LEARNED IN COMBAT

8 November 1942 to 1 September 1944

FOREWORD

This summary of "Lessons Learned in Combat" has been written by the men of the 34th Infantry Division and is presented in their words.

The Division entered combat first at ALGIERS, NORTH AFRICA on 7-8 November 1942 and elements of the Division were engaged almost continuously from that date until the German surrender in May 1943. Landing in Italy on 21 September 1943, the Division has been committed to action in every major engagement of the campaign to date.

Elements of the Division have been in active combat with the enemy over 400 days since the initial landings in Africa and the Division itself has been in command of a sector for 330 days.

Many of the "Lessons Learned" are not presented in this summary. They were lost, unfortunately, with the heroes of the Division at ALGIERS, at FONDOUK, at Hill 609, at BENEVENTO, at the VOLTURNO River and MT. PANTANO, at CASSINO and ANZIO, at ROME, CIVITAVECCHIA, CECINA, ROSIGNANO, and LIVORNO.

Charles L. Bolte

CHARLES L. BOLTE,
Major General, U. S. Army,
Commanding.

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LESSONS LEARNED IN COMBAT

CHAPTER I - INFANTRY

1. Infantry Operations. No attempt will be made to discuss tactics since the basic principles employed by Ghengis Khan are still in vogue today.

a. Shock Action. The prompt follow-up of a shock action by Infantry is of paramount importance.

Major WARREN C. CHAPMAN, 133rd Infantry.

"In many instances our troops have not taken advantage of shock action and it has cost us many casualties. By the term SHOCK ACTION I mean artillery concentrations, mortar fire, bombing attacks, tank or TD fire, bazooka fire and hand grenades. All must be followed aggressively and with no delay. Artillery concentrations and barrages are practically useless unless they are followed closely enough so that the rifleman can close with the enemy before the enemy front line soldier realizes that the fire has lifted and runs back to man his guns. In following the artillery closely you may have some casualties from your own artillery, but in the long run your casualties will be much lower. From my experience in CASSINO I learned that the Germans 'took up the slack' the moment he found it was there. One day at CASSINO we had a coordinated attack planned to get Company "L" across the main street to gain a foothold on that side of town. Tanks were to fire a preparation on known and suspected targets and, as a signal to the riflemen that the tanks were to cease firing, the command tank was to fire four rounds in a doorway that was visible to all. Then the infantrymen were to dash across the street immediately and gain entrance to the buildings before the enemy had recovered. However, the riflemen waited 10 minutes before they started and by that time the Germans were back on their guns and stopped the attack. There is no fire more devastating and morale shattering than well-directed tank fire. At CASSINO the Germans knew the location of my battalion observation post and tried continually without success to knock it out with machine gun, mortar and artillery fire.

German tanks gave us very little trouble in CASSINO but at dawn one morning they drove up one Mark VI and started firing at my OP. Needless to say I was scared and was sitting in a corner saying my prayers and trying to call the artillery. I stayed in that corner, too, until five minutes after the last round was fired before I went back down the trail with the phone to try to splice it on the line. During those five minutes the enemy could have come in the building and found me in the corner with very little fight left.

In CASSINO the battalion used, on the average, 500 grenades a day. One of our methods of advancing was to throw a grenade into

a room and then to get into the room with a Tommy-gun right after the grenade went off. If there were any Germans in the room, those who were still alive were found lying on the floor with no fight left."

b. Street Fighting. The experience of the 34th Infantry Division in Italy has been that the enemy defends towns and incorporates buildings into his defense systems whenever possible. While the cardinal principle is to by-pass and cut off the defending forces, the exigencies of the situation may demand a frontal attack. If the latter be true there is no easy answer to the problem. The enemy can only be evicted by hard work.

Technical Sergeant THEODORE H. PETERSON, 135th Infantry.

"After once entering a village a strong point should be established with all around defense. In the case of a platoon you can then send out smaller units from this strong point to liquidate other buildings near by, while being covered by fire from the strong point. As soon as all buildings in the vicinity have been thoroughly cleared of the enemy then the platoon can regroup at another strong point and continue the job. This was the method employed by our platoon in the attack on ROSIGNANO and proved to be very successful. In this same engagement we also found that the use of tanks are a great help in street fighting. A few blasts from a 75 into a building will either kill the enemy or shake them up so badly that their capture becomes quite easy provided we follow up closely. Of course, it must be remembered that tanks are very good targets for the enemy bazooka man, and as a result they must be given adequate protection by the infantry."

Sergeant ARTHUR R. WORMAN, 133rd Infantry.

"I am experienced mostly in village fighting. The main thing is not to miss a house, and when you go in to take it you want to be certain not to miss a room, or any other place a person can hide. When you go up to a house you want to go to the side where there are the fewest windows and where you have the most cover."

Staff Sergeant IRVING C. ZEBOROWSKI, 133rd Infantry.

"This incident took place in the battle for CASSINO around the middle of February 1944. There were twenty of us grouped together in one building. It's fine to have a friend or two with you, but in this case, there was just too many for one building. The building was shelled by the enemy burying all of us. I was wearing my helmet, luckily, at the time, which saved my life. My friends weren't so fortunate. Of the twenty, about one-third got out alive.

Staff Sergeant FRANCIS R. ELKINS, 133rd Infantry.

"This incident took place in the battle for BENEVENTO around

the middle of October 1943. We had almost cleared the town and built our line on its northern edge. Somehow, someone failed to realize the importance of a road block. Early the next morning, two Jerry halftracks and one 2½ ton truck rolled into the middle of town with the intention of blowing a bridge. The truck was loaded with TNT. Luckily, Jerry was as much surprised as we were, so he withdrew with his halftracks after we captured the truck. In my estimation a good road block would have prevented this and if Jerry had decided to open up, we would have suffered plenty of casualties."

Captain REID B. HUFF, 135th Infantry.

"Contact by visual means or radio is essential in street fighting between units moving through town in different sectors. At SAN VITTORE Company "I" was held up 4 hours by friendly fire from Company "K"."

Major WARREN C. CHAPMAN, 133rd Infantry.

"In discussing street fighting in Italy the reader must first realize that most of the Italian towns do not have regular well laid out streets, and that all the buildings are close together and have thick stone walls and usually very few doors and windows. In CASSINO the Germans had every building in the line of our advance fortified. Gun emplacements also were camouflaged in piles of rubble presumably created by our own artillery and tank fire. Their fires were well planned and coordinated so that each gun was covered by another.

To gain our first foothold in the town we used smoke and tanks supported by infantry. The infantry under unobserved fire removed mines and filled in anti-tank ditches to assist the advance of the tanks. On gaining the first foothold we got the men in buildings and consolidated our positions with particular attention to getting bazookas in large numbers placed in the most forward positions. German tanks in this sector had been giving us trouble, but the German armor didn't bother us in CASSINO because we had so many bazookas well forward. The bazooka proved to be a very effective weapon in street fighting. It was the squad leaders' direct fire artillery and with very little instruction and experience can be fired with surprising accuracy. Since all doors and lower windows were covered by fire, at times we had to make other entrances to these buildings through thick stone walls. If tanks could be manoeuvered to shoot holes in these walls, it was done. Otherwise, the bazooka was used. In one instance it took nine rounds to get a hole big enough to go through. After an entrance was found or made a grenade always preceded the infantryman into the room if there was any possibility of Germans being there. In cases where a house could not be approached, tank fire was used to level the building to the ground. Of course, this gave the Germans some wonderful

rubble piles to build camouflaged emplacements but they lost the overhead cover for artillery and mortar fire. We also used an 8" howitzer on some buildings. It can be fired with precision and changes as small as ten yards can be made so we used it on targets within 50 yards of our own troops. We called it sniping with an 8" how. Mortars were not too effective against the buildings and were used mainly to harass and interdict paths.

Snipers were employed freely by both sides and sometimes I am inclined to think that the Germans had more success than we did. During the lulls our men got careless and became excellent targets. On the beachhead at ANZIO the opposite seemed to hold true.

In the house-to-house fighting or room-to-room fighting most of the men preferred the Tommy-gun and because of its size preferred the carbine to the rifle for working in close quarters. For defense, machine guns, both light and heavy, and BAR's were placed with the forward elements.

When we were in CASSINO the nights were very dark so little offensive action was attempted. At times we would have a very limited objective of say the next house. In many cases 'No Man's Land' consisted of about a 10-yard space between two houses; this was ideal for playing catch with grenades. A grenade that explodes on impact could have been used. At night we would make readjustments, reliefs, bring up supplies, and evacuate killed and wounded. The hand carry was only about 200 yards. Except in the most forward positions movement was comparatively safe.

We had no 300 radios at this time and the 536 was useless but we used sound power phones to all platoons and outposts. Wire was being knocked out continually by artillery and mortar fire so linemen and runners were kept busy."

c. Counterattack. Every soldier actively engaged against the German Army knows its method of counterattack late in the afternoon to disorganize our forces preparatory to executing a withdrawal under the cover of darkness. The principle of 'counterattacking the counterattack' has been evolved in the Division with excellent results.

Captain RICHARD H. SUGARS, 135th Infantry.

"In numerous incidents we have been too slow in taking advantage of our enemy. One of these times was in the vicinity of CAMPO LEONE, Italy. The situation had been stabilized by quite a number of German infantry and tanks and we had been in approximately the same position for 48 hours. During that time there were heavy exchanges of artillery and mortar fire plus machine gun and sniper fire whenever a soldier exposed himself.

Just at dusk on the second evening Jerry had decided he had taken enough punishment (as we learned later) and made a withdrawal. The general method that he uses to throw us off balance is to make two or three small attacks accompanied by much artillery. This particular evening he hit us with two simultaneous attacks each

composed of approximately one platoon of infantry and one tank. He drove in our outposts and the enemy infantry came right to our MLR before it was stopped. Then he immediately withdrew out of the zone of our defensive fires. The whole operation did not take 15 minutes at the most. The confusion and excitement that follows every attack by the enemy was intensified by the darkness, and, needless to say, it was at this time that the enemy completed his withdrawal. In spite of our continual heavy harassment the Germans managed to take all their equipment and wounded with them, although they left about 100 dead on the field.

At the time the battalion had already committed its reserve and due to the strenuous fighting in the last few days we were unable to reorganize and pursue the enemy with a night attack which would have accomplished two missions. First accomplishment would be the capturing of much ground with the minimum amount of effort due to the disorganization of the enemy. Second, we would have denied him the opportunity of establishing another defense line.

I believe the solution of this is prior planning by battalion and regimental commanders. Keeping in mind the possibilities of this type of enemy action, commanders should hold a reserve and make the necessary daylight reconnaissance. Much can be accomplished to insure the success of this type of action by training in the company night attack. It should be emphasized that small groups must attack a limited objective simultaneously and reorganize into their company organization upon reaching the objective. There often are not enough trained men capable of guiding groups across strange ground and of recognizing their objective in the dark. Consequently, the few men that are capable have to do most of the fighting for a company while the rest of the unit comes along in a column of twos, each man keeping so close to the man in front of him that he stops on his heels for fear that he and all the men behind him will get lost if he breaks contact."

Major FRED H. LIPPUCCI, 135th Infantry.

"It is recommended that immediately following any such spoiling attacks the enemy be pursued vigorously either by passing through the disorganized assaulting troops with a reserve or by a rapid reorganization. This, I believe, will enable us to pass through, in, or around the retreating enemy forces and will prevent him from establishing himself on a new terrain feature. Such attacks made by this regiment in the vicinity of ROSIGNANO resulted in our troops walking through the enemy position and establishing themselves upon the high ground to the enemy rear without suffering one casualty, whereas it had been impossible to gain any ground whatsoever during the hours of light."

d. Mountain Warfare involves no new basic principles and in most instances in Italy has not required special troops. It does require some special equipment - particularly warmer clothing and light weapons. The extremely

difficult terrain encountered in the mountains requires men to undergo extreme hardship and necessitates top physical condition.

Second Lieutenant ERVIN N. [illegible], 168th Infantry.

"The Battalion received the mission of taking Mt. PANTANO and holding it. It was to be a dawn attack. My explanation will start after the objective had been taken.

Important facts observed after objective had been taken:

(a) Ammunition was very limited, especially hand grenades due to the fact that climbing and brush causes the men to lose them.

(b) Food was not a major item because men had no desire to eat in large quantities while fighting.

(c) Water supply was very limited due to lack of water cans in each company. Many wounded men needed water for medical treatment.

(d) Medical supplies were very limited due to the fact the terrain was very rough and the Aid Men and forward aid station which was on the hill had carried less than usual. The big problem in this line was litter bearers. The time estimated to evacuate a patient from the mountain was about two patients per litter squad per day. Therefore, many men were taken from rifle companies, which weakened our line.

(e) Reserve Support - The objective was almost lost due to the lack of proper reconnaissance before starting on the mission. We should have had larger scale maps and more maps per company. The fact was there were many more enemy behind the objective than estimated. In this type of terrain enemy are concealed and exact power is never known until close contact is gained.

One observed fault which was never corrected on this mission was the use of machine guns. The heavy weapons company should always have sufficient means for transporting their heavy weapons. In this mission mules would have been the answer. If there is no means of transporting weapons except to carry them, then the heavy weapons company should change over from water cooled guns to the light machine guns such as the rifle companies have. When the battalion is on the defensive in mountain terrain then heavy guns might be used again.

The battalion S-4 should have one light machine gun per company on hand at all times. Many are lost due to enemy action.

The objective was taken with very little resistance. This was due to a surprise attack and the enemy were not in their positions. About an hour after objective was reached and secured, the enemy counterattacked to regain the ground but failed. They then withdrew to the base of the hill and we soon received an artillery barrage followed by mortar fire. They then tried to regain their lost ground, continuing their attacks seven different times during the day on the same part of our line.

We almost lost our objective for several reasons: Lack of ammunition and hand grenades and failure of communications to the artillery. For night work on a mountain, it is very important to have flares.

After all attacks had failed for the enemy in this sector, they tried to out-flank the next mountain and then put machine gun and observed mortar fire on our side of the hill. It is necessary, therefore, to always have connecting files with all flank units and close contact. We had such contact on this mission."

First Sergeant GERALD J. GREGOR, 135th Infantry.

"You cannot smoke very often as your wind becomes cut.

The neglect of the feet leads to trenchfoot. The socks have to be dried, if possible, and changed. Even though the shoes are damp or wet, dry socks and the feet dried by rubbing well with a towel and massaging with hands, feel much better and blood circulates again thus taking the cold and pain out of them.

New men or replacements are the persons who have the most trouble.

The clothing, when wet, should be wrung out for a damp piece of clothing is not near as miserable and discomforting as a soaking wet piece.

For the bed, instead of lying on the cold, damp ground, you can gather up dry leaves, straw, long grass or cardboard upon which blankets can be placed. This keeps the cold from penetrating the body thus causing aches and pains and cases of rheumatism."

Corporal CHARLES W. BRANSON, 135th Infantry.
Technician Fifth Grade HAROLD C. HILLESTAD, 135th Infantry.

"In the handling of mules in the mountains, they should never be rushed where the going is tough. The mule will usually slip and fall, upsetting the whole load.

During one experience of this kind, we were taking a mule train across a muddy stretch of ground which, at one time, had been a corduroy road. Starting across at a hurried pace, a number of the mules were pushed off the road and became mired resulting in much time being lost in reloading and getting under way."

First Lieutenant BURGESS R. WILSON, 133rd Infantry.

"Of all the lessons learned on the field of combat, each only emphasizes the teachings found in the field manuals. Every time a cardinal rule was broken a casualty resulted.

During one phase of the mountain fighting my platoon dug-in in the vicinity of a prominent trail junction. That evening Jerry threw some 170's at that trail junction. My platoon suffered three casualties. Results could have been worse. Lesson learned - avoid as much as possible all prominent land marks, which Jerry might have 'zeroed in', such as cross roads, trail and road junctions, main stream beds, and the like.

In mountain fighting, Jerry nine times out of ten, sets up his machine guns to command trails, deep gullies and ravines. By 'riding the ridges' these points of resistance may be outflanked and wiped out."

Technical Sergeant ELDON P. SWAN, 135th Infantry.

"If the terrain is especially steep and the going complicated by a muddy trail, the men are apt to lose contact. This especially applies to weapons platoons and companies. Unit commanders should take into consideration human limitations on such difficult marches as these."

e. Night Attack. Extremely difficult to carry out, a night attack is nevertheless the only method assured of reasonable success across open ground and against the German masters of terrain. The Division, once battle seasoned, has always preferred this type of attack under the above circumstances, but each man queried emphasizes the necessity for strict control to lessen the possibility of lost contact between attacking elements. Attack plans must be the essence of simplicity. Masterly conceived double envelopments generally only result in friendly forces shooting up each other.

Lieutenant Colonel JOE L. BOURNE, 168th Infantry.

"The points concerning the rifle battalion conducting night operations we have in mind are as follows:

(a) Attack on a very narrow frontage.
(b) Use of Automatic Weapons.
(c) Mine Fields.
(d) Communications.

We have found it sometimes advantageous to launch a night attack in a column of companies. This method has been quite effective when the regiment had been stopped in daylight attacks, and after the enemy opposition had received a pummeling from our artillery, cannon and mortar fire during the daylight attack. A specific example of this type of attack was the action of the battalion against LANUVIO. The battalion formed up at night, moved off using a road as its guiding axis for advance, shouldered its way through opposition to the high ground in back of LANUVIO before daylight. The action caught the enemy by surprise, and by rapid deployment, we were able to button up the objective and hold it while other friendly troops mopped up and moved into position to continue the advance upon ROME.

Another example of this battalion using the same method occurred in its night action against COLLE ALBERTI (high ground east of LORENZANA). Briefly, the situation for this action was as follows: The 3rd Battalion, 168th Infantry Regiment had been stopped in its attack on LORENZANA by enemy opposition located in LORENZANA and the high ground on COLLE ALBERTI. In this instance the battalion again attacked in a column of companies, shouldering its way through to the objective, catching the enemy by surprise and at daylight buttoning up the objective. The critical time for both of these attacks was that period when leading elements of the battalion had reached the objective and organized a rapid deployment to mop up the enemy that had been by-passed or that might be located in any direction. Upon the first rays of sunlight the battalion

vigorously started its mop-up action, catching many enemy by surprise and completely bewildered. The point we wish to bring out is that by attacking on a very narrow frontage and in a column of companies we were able to move up required strength to dispose of enemy opposition encountered, or to push it aside and continue on to the objective. The formation is easy to control, has great depth in the attack, and, even though enemy are by-passed, the complete surprise and bewilderment of the enemy when waking up in the morning and finding there is opposition surrounding them, especially in their rear, is highly demoralizing, with the result that the enemy has surrendered without too much of a fire fight. The successful attack on COLLE ALBERTI enabled the 3rd Battalion to take its objective, the town of LORENZANA, and for the regiment to continue on towards its regimental objective.

We believe, by experience, a good rule to follow is to so plan your night movements that they include attachment of at least one heavy machine gun platoon to the company. It is highly important to get your automatic weapons in early and keep them in late. Mortars should be in place so that they can fire at dawn and if necessary to fire at dark even though they have had to displace to an entirely new position during the night. Mortars can successfully be fired from map data without actual observation. The cannon company and artillery should be ready to fire by map data even though they cannot observe. If the fire of the mortars, cannon company and artillery is ready on call to be laid well in front of the objective and approaches on the flank, counterattacks by the enemy will be broken up before they ever get started. Again the critical time to have all this map data properly coordinated and ready for use is during that mop-up period just preceding full daylight.

The best laid plans of mice and men often run agaft now and then. Mine fields and booby traps sometimes cause many changes in a preplanned night operation. An attack seldom progresses exactly as planned; therefore, you must have flexibility. You absolutely cannot blindly disregard mine fields. You must probe and try to get around, avoid the mines if possible. When there is no other way out they must be removed. Removal of mines in the dark at night is not a simple little task. Ammunition and Pioneer Platoon personnel and engineers with proper equipment are sometimes absolute necessities. Sometimes the answer to the problem is to have specially trained men with the companies.

Let us again point out that the attack on a very narrow frontage, shouldering your way through, so to speak, is perhaps one of the best methods of passing through a mine field. Sometimes civilian partisans have proven invaluable for the location of mine fields. A specific example of this was the battalion's night operation in establishing a bridgehead across the CECINA River to the north of MONTESCUDAIO, Italy. The battalion's first operation was to sweep the south side of the bank clear of enemy and this was accomplished previous to midnight. Civilians living in the area informed us of mine fields in the river bank, in the river and surrounding network of roads. Patrols carefully investigated and marked approaches

through mine fields in several different points of the river. The battalion, less one company, was able to cross the river, establish road blocks and secure high ground to the north of the river. Other elements of the regiment were able to pass through just prior to daylight and continue the attack.

The heart and pulse surrounding all night operations we have had to date is communication. We believe in using plenty of wire and having the front-line elements string wire as they progress. This may take a little more time, but the overall advantage gained, we believe, makes for a speedier and more successful operation as a whole."

Captain FRANK M. COCKETT, 168th Infantry.

"It is my belief, and others share the same opinion, that some men are afraid of the dark. To be left alone and lost is nerve breaking.

To establish confidence in personnel, small groups should start out into the hills unfamiliar to them and individually be sent back to a different place. This will not only instill confidence in men but will train them in 'rounding up' all the details that make for individual training."

Captain WILLIAM H. HARRIS, 168th Infantry.

"About the 28th of June in the vicinity of MONTEVERDI, Italy, fifteen men and one officer from Company "A" had run into a fire fight while attempting to establish a road block 1500 yards to the north. The road block was held off and the officer wounded.

During the night Company "B" was given the mission of clearing the way for the road block, and passing on to a hill 1500 yards beyond. We had a heavy machine gun platoon and two guides to the road block. It was necessary to move forward in a single file, and stay closed up. The reason being, the terrain was very rough, thick undergrowth and ditches prevailing. Several times it was necessary to halt, and wait for the company to close up. The weapons platoon and machine guns were near the front. I felt that the rest could keep up with their progress. The only way to know when there was a break was to check back by voice along the column, or when the rear passed up word to wait we knew there had been a break. We were about four and one-half hours covering the distance to the road block.

Points I learned from this:

(a) If possible see the ground in daylight before moving over it.

(b) If working from maps, a 1/25000 is much better than 1/50000.

(c) It is necessary to allow ample time.

(d) The rear must keep contact with the front.

(e) It is hardly possible in heavy underbrush to put out flank security without losing it.

(f) The 536 radio works well in some spots; in others it works very poorly."

Second Lieutenant SANTO La BELLA, 135th Infantry.

"I was ordered to attack a certain hill with my platoon at daylight. The terrain was wide open. We had no cover whatsoever. The enemy allowed my platoon to proceed about half way across the valley floor, then opened up with mortars, artillery, machine gun and 20mm fire. My platoon dispersed, I lost control and the platoon was scattered until dark.

When attacking an objective, if there isn't any covered route approaching the objective, the attack should be held off until dark."

Sergeant GEORGE PAPROS, 135th Infantry.

"The success of night attacks depends on the individual soldier maintaining contact and complete silence on moving up."

First Lieutenant JIMMIE NORTH, 135th Infantry.

"A heavy concentration of small arms fire is demoralizing at night. If you can get a man to pull the trigger, the sound of his rifle and the rifle on the right and on the left will give him sufficient confidence to pull him right up to the objective."

f. River Crossings. The 34th Infantry Division has made four successful major river crossings. (Three over the VOLTURNO, and one over the RAPIDO). Careful planning, thorough reconnaissance, surprise, and night attacks all played their part in the success of these operations.

Captain FRANCIS J. KENYON, 168th Infantry.

"On October 13, 1943, the battalion had the mission to cross the VOLTURNO River and secure the high ground immediately to the North. This mission was given to the battalion commanding officer three days prior to the attack so he could make his reconnaissance. Immediately after receiving these orders the battalion commanding officer made his reconnaissance of the objective and then took his company commanding officers to the OP to observe and study the terrain. He did this in ample time so that the company commanders could take their platoon leaders to the OP and plan their attack.

On these nights previous to October 13, the battalion commanding officer had reconnaissance of the river bed made by two officers and six enlisted men. On these nights the mission was to find a crossing for the infantry and the location to set up some supporting weapons; 81mm mortars, heavy machine guns, etc.

These night reconnaissances found the location for the supporting weapons and also decided the best place to cross the river was at the most unlikely spot, this being the deepest water and the highest banks. They had found that all the best crossing spots were covered by enemy automatic, artillery and mortar fire.

To make the crossing at the place chosen the engineers were needed to clear a lane on this side and string a rope across the

river. On October 12, 1943, the battalion commanding officer was given the H-Hour and called all officers to a meeting and showed them aerial photos, maps and final plans of attack.

Immediately after dark on October 12, 1943 the reconnaissance group started for the river. With them were the engineers and supporting weapons. They had the supporting weapons placed and dug into position and these weapons along with riflemen covered the reconnaissance group and engineers while they strung the rope across the river. All this action was completed by 2400 hours and without being heard or observed by the enemy.

The H-Hour was 0215 and the attack was to be preceded by a 15-minute artillery barrage. At 1200 hours, the battalion moved to the river bank and was in position by 0130 hours, to start the attack in a column of companies in a column of platoons.

At 0200 hours the artillery barrage started and the leading platoon moved slowly across the river. Although the artillery shells were landing on the opposite bank close to the river it was decided to take that risk and gain surprise on the enemy.

Every man, down to the private, knew the situation and his mission when once on the other side of the river. Although there was mine fields, dug-in automatic weapons covering the banks of the river the battalion was on its objective before daylight and the only casualty was one man killed by machine gun fire.

In my opinion this success was due to a good study of the terrain, detailed reconnaissance of the river on both sides and the use of sand tables so that every man knew daily the situation. With any of the above missing I'm almost sure the crossing would not have worked so smoothly as it did with so few casualties.

On the night of November 1, 1943, the battalion commanding officer was told that his battalion was to be prepared to attack, in 3 days, across the VOLTURNO River and secure the town and high ground in the vicinity of S. MARIA OLIVETTO.

That same night he took his company commanding officers and 8 enlisted men down to the river bank to make a reconnaissance. This reconnaissance was to find a shallow crossing for the troops and to see the objective. On the morning of November 2, the battalion commanding officer was told that H-Hour was pushed up and the attack would take place at 2400 hours November 2.

At 1400 hours, November 2, 1943, the battalion commanding officer had a meeting with all officers and showed them an aerial photo and maps of his plan of attack. It wasn't practical for a reconnaissance to actually observe the terrain due to enemy observation.

At 2000 hours the battalion moved to a forward assembly area and held up while the company commanding officers took the platoon leaders to the river bank and showed them their objectives. At 2400 hours the artillery started and troops moved across the river in a column of companies in a column of platoons.

On reaching the opposite bank the commanding officers took up an attack formation and started for the high ground. To reach this objective the troops had to cross 2000 yards of flat ground dotted here and there with orchards.

The lead platoon leader decided to use an orchard to conceal his movement and when they reached the center of it, some one stepped on a series of mines. Of this platoon all NCO's were seriously wounded, or killed, with the platoon leader a litter case; approximately 8 men came out unscathed.

The following platoon then took the lead and moved around to the left of the orchard. This platoon also ran into mines wounding the platoon leader and several men.

The third platoon in line then took the lead and swung away from that area moving in a wide circle and after moving approximately 1000 yards this platoon also ran into mines, wounding the platoon leader, killing the company commanding officer and wounded and killed more men.

At this point, what was left of the assault company reverted to battalion reserve and another company took the lead. They swung to the right and again encountered mines wounding 3 officers and several enlisted men. It was then decided to pull back a little and try to get through on the left, but once more the lead platoon ran into mines, wounding more enlisted men.

The battalion commanding officer saw that daylight was not far off and decided to draw back and try another route far off to the left. In this area the battalion moved to the base of the objective and came under machine gun fire. When the machine gun was heard a sigh of relief went through all the men as they knew that the battalion had cleared the mined area and was started up into high ground.

The battalion continued up the hill in the face of this machine gun and mortar fire and secured its objective, capturing 15 enlisted men and 1 officer. The reason the battalion attack was so fierce was that all men were anxious to be on the high ground and get into the enemy's position, for they knew there weren't any mines there.

The opinion was that if we had had more time to prepare for the attack, patrols could have found the mined areas and marked them. We could have then had some lanes cleared by the engineers and A & P platoon or had some tanks precede us with the infantry following in the tank tracks. With the mined area cleared the battalion could have saved many of the casualties that we received."

First Lieutenant GEORGE C. GRACE, 168th Infantry.

"Approximately five days prior to actual operation, the officers were notified that the Battalion would force a crossing of the VOLTURNO River Southeast of the town of CAJAZZO and seize the high ground East of CAJAZZO. Every officer in the battalion was taken forward to the high ground over-looking the ground over which the battalion was to operate. We all familiarized ourselves as well as possible with the terrain.

A number of patrols were sent down to the river to determine such things as depth, speed of current, river bottom, height of river banks and to try to locate enemy positions.

H-Hour was 0200 hours, 13 October 1943. The battalion moved out from its bivouac area at dusk 12 October and moved into a rear assembly area. Here the officers checked their men and equipment for such things that pertain to a night operation. Radios were checked also.

The plan of attack was for "A" Company, followed by "C" and "D" Companies to make the main effort. "B" Company was to cross approximately 800 yards East of battalion and create a disturbance to deceive the enemy. If they could make the crossing all right, they were to swing left and join the battalion. If not, they were to pull back and cross where the rest of the battalion had crossed. Company "M", 3rd Battalion, 168th Infantry was to support the attack from previously selected positions.

The 2nd Battalion was on our right flank. Between our left flank and the 3rd Division there was a gap of approximately one mile.

The artillery concentrations were to be lifted 100 yards every five minutes.

The crossing was to be made with the assistance of infantry assault boats. As it turned out, these boats weren't necessary, as it was found that the river could be forded.

Once the river was crossed the companies were to follow an azimuth to a predesignated farm house, which was an assembly point. The attack to the high ground was to continue from there.

At 0200 hours, the battalion moved out with "A" Company leading. The actual crossing was made with little difficulty. The battalion did receive some rifle and machine gun fire, but it did not seriously hamper the crossing. "B" Company was able to cross and joined the battalion as planned. The entire battalion was across the river by daylight.

The rifle companies then moved out across the flat ground leading to the objective, and were caught in a combination of rifle, machine gun and mortar fire. The fire held up the battalion for the better part of the day.

Company "D", which could not move forward due to the rifle companies being held up, dug in along the river bank. Two 81mm mortars were set up and some fire was delivered. The communication was not working very effectively and this hampered the 81 fire as it was necessary for the rifle companies to adjust the fire. The heavy machine guns were set up along the river bank, but did not have the opportunity to fire.

An enemy smoke screen layed down on our left flank caused some concern and the heavy machine guns were changed to cover this threat, but no counterattack developed.

Companies "A" and "C", by various manouvers during the day, forced the enemy to withdraw to the higher ground. This action took quite some time as the enemy machine guns were well placed and could cover his front very well.

During this period "B" Company flushed a group of about 40 enemy into the open. Then the M-1's went to work and very few of the enemy got away.

When darkness fell, the attacking companies moved up to the objective and secured it. "D" Company and Battalion Headquarters then moved up and the battalion organized the defense of the objective."

Technical Sergeant EARL N. GRUNDMIER, 135th Infantry.

"For the crossing of the VOLTURNO River, October 13, at 0200 hours, we got everything arranged and drilled the planned attack order into every man's mind on 12 October. All support machine guns were placed and my section attached to the assault company of riflemen. We crossed the river which was about 150 yards wide and up to 4½ feet deep. It was very swift current and we had to string a line to keep from getting washed down stream. The main thing we gained was surprise. Mostly by crossing where Jerry wasn't expecting us and close artillery support, which fell within 100 yards upstream from us all the while we crossed.

It was very successful and we had gained the objective about 1500 yards on the other side of the river, without Jerry getting completely organized. Fast movement and very good control of artillery with close in support, to keep Jerry down until we were right on him, was mainly responsible for the successful mission. The machine gun platoons carried heavy machine guns at that time and it was very hard to keep up to a fast moving assault team. Later we changed to light machine guns for assault and attack movements and they were much easier to handle and just as good fire power. We use them all the time now.

The heavy machine guns are carried in the battalion supply train and we actually have never used them since, except on defensive positions at the beachhead at ANZIO. There we could have used lights just as well and it seems the heavy machine guns are just excess luggage in this type of war."

g. Patrol Operations. The patrol in the final analysis is the major source of enemy information. While there are limitations it is the patrol who verifies the IPW and PI reports on the ground. In the early days on the ANZIO Beachhead, where patrolling was most extensive, it was found that methods used left much to be desired. Very few prisoners had been taken and there were large sectors on the division front for which no information had been forthcoming for as much as three weeks. To remedy the situation a special patrol group was organized in each regiment of volunteer men. Given names such as the 168th Infantry Rattlesnakes, the 133rd Infantry Red Raiders and the 135th Infantry Blue Devils, the men lived and rehearsed their operations in the rear area. In a relatively short time the new organizations proved their worth and provided the division with a wealth of information.

First Lieutenant HAROLD C. BISHOP, 168th Infantry.

"It is of great importance in defensive positions to gain intelligence through reconnaissance and combat patrols. The following faults were common with many of our patrols:

1. Carelessness in moving forward, resulting in discovery by enemy at distances of as much as 200 yards.

2. Lack of aggressiveness, partly due to fear of AP Mines, or of enemy ambush, and partly due to lack of orientation of patrol members by patrol leaders, resulting in doubt as to mission and methods.

3. Inability to capture prisoners, due to the above factors.

Recommendations:

(a) Emphasis on night training, and use of smaller patrols. Reconnaissance patrols of 2 to 4 men, combat patrols or raids of 10 to 12 men are sufficient, and considerably safer in a majority of cases.

(b) The removal of patrols from front lines to rear areas twenty-four hours prior to the time the patrol is to depart."

First Lieutenant ERIC E. RODEWALD, JR., 168th Infantry.

"On 2 April 1944, in the vicinity of ISOLA BELLA, Italy, a patrol of 12 men made a raid on an enemy strong point at MONACO which was located about 300 yards in front of our front line positions. Our mission was to generally raise hell with Jerry. We proceeded to within 50 yards of MONACO without being detected. The rifle grenadier fired one round at the roof of the house causing a small fire and enemy confusion. As the enemy tried to extinguish the fire and man their weapons, we opened fire with rifle, BAR and tommy-guns causing them an undetermined number of casualties. At this time, dawn was breaking and we proceeded to return to our own lines under cover of smoke fired by the battalion 81mm mortars. We suffered no casualties on this raid and an outpost at ISOLA BELLA observed the enemy picking up many casualties. The outpost inflicted two more casualties with sniper fire.

I recommend that intelligence officers of all units inform patrol leaders of a mission at least four hours in advance of the time they are to begin. This would give the patrol leader time to make plans, orient his patrol and procure any extra equipment that is needed."

First Lieutenant ARTHUR TREO, 168th Infantry.

"On May 13, 1944, I moved out with a five-man patrol, down a deep draw running perpendicular to the enemy lines. This patrol was not a battalion order but independent action of the platoon. We moved out in a draw which was winding and afforded good concealment in advancing. I informed my men that our mission was to investigate the draw for approximately 800 yards and fight only if necessary.

It was my desire to capture a German, if possible, and I believed at that time of day he would not be alert since there never was any daytime activity on the beachhead.

We proceeded in single file down the draw for approximately 600 yards until we came to a bend in the draw after which it

straightened out for about 150 yards. At this point, I observed a German crawling into a machine gun position up on the side of the bank about 150 yards away. I left three men behind at this point in position to place fire on that gun should they open up. My sergeant and I proceeded on down the draw. I instructed the men I left behind not to fire unless the enemy fired, or unless I opened fire. Using the available cover and concealment we advanced to within 50 yards of the gun emplacement. At this time, one of my men opened fire with a tommy-gun. I found out later he had done so because he saw a German rise up and aim a rifle in the direction of the sergeant and myself. He hit the German, but at this point Jerry opened up with crossing machine gun fire and a rain of potato mashers. The first grenade wounded me in the arm and leg, rendering my right arm useless. The sergeant was hit in the leg and couldn't walk.

There were approximately 14 Germans in this position and they witnessed our approach and sucked us in. They came out of their position and got in behind us and drove off my three men. Then they started toward us searching through the grass.

We decided we didn't have a chance to fight our way out and rather than surrender we decided to take our chance on their not finding us. They walked through us but did not find us. When they had all gone back to their positions we decided we would have to stay until dark because we were wounded and could not fight effectively if observed moving out. Too, there was no wind blowing and trying to crawl out through tall grass would have attracted attention. We lay still until 10 o'clock that night, at which time we got out safely and returned into our lines."

First Lieutenant RICHARD BOWDEN, 135th Infantry.

"Patrol action is one of the most important things in combat and two small patrols are better than one large one if they are constantly in communication and terrain permits them to be mutually supporting. Reconnaissance of long valleys and high ground on both flanks is possible at the same time.

SCR's No. 536 are excellent for patrol work of this type. Patrols operating along the high ground on either side of a valley can visually survey all the terrain and easily pick up any enemy movement in the sector. By using this system prisoners have been taken without a shot being fired."

Captain REID B. HUFF, 135th Infantry.

"Be careful in sending patrols along same route. Example: SAN VITTORE, Italy. Five or six patrols were sent into the town from SE on different occasions. When attack was made against the town, the right company followed the same route. The enemy had concentrated men in that sector. They stopped an entire company in the first stage of attack. Our left company moved over new territory without receiving fire or contact."

Second Lieutenant TURNEY E. SHANON, 133rd Infantry.

"It has been my experience that in the type of action encountered in the last phase, i.e., a delaying action by a small body or by a lone sniper, that two scouts are not sufficient. I used from three to five men as an advance patrol, picked for their coolness and aggressiveness, in practically every advance made by my platoon.

For an instance, as we entered the town of ORATORIO, bordering on the ARNO River, on the 24th of July, we were in a column of platoons, my platoon, the 2nd, leading. The aforementioned point patrol of five men, 2 armed with sub-machine guns and the remainder with M-1 rifles, entered the town approximately 40 yards ahead of the platoon. As they neared the town square, they were fired upon by a sniper armed with a machine pistol. Immediately, they took cover and laid down a heavy volume of fire on the position forcing the sniper to withdraw. If the customary 2 scouts had been used, it would not have been possible to build up sufficient firepower without deploying the platoon and losing valuable time.

This formation is also useful in heavily wooded sections, where two men cannot amply reconnoiter routes forward, thereby delaying the advance."

Staff Sergeant MICHAEL D. COURTENAY, 133rd Infantry.

"During the period of July 7 to July 19, 1944, "A" company was moving through attack after attack. We kept moving as these advances were rapid. Also we were caught in quite a few traps. This brings up the point of scouts. The scouts, in my point of view were not far enough out and didn't really take time to look at the terrain.

My suggestion is to give men more training in scouting and patrolling. Scouts are a very important factor in a fast moving advance. A man who knows what to look for can save many lives."

h. Defensive Operations.

Extract Historical Narrative & Journal, AC of S, G-3, April 1944.

"The 34th Inf Div was wholly on the defensive throughout April. At no time in its combat history had the division been on the defensive in such unfavorable terrain. Because of the enemy's advantage in observation, movement in the regimental areas was restricted to the hours of darkness, and even the most rearward elements of the Division were dug in."

First Lieutenant HAROLD C. BISHOP, 168th Infantry.

"The recommendations made in the following paper are based on experience gained in a stable defensive position on the ANZIO Beachhead between March and May, 1944, and to a certain extent, in a defensive position in the vicinity of SBIBA, Africa, in March 1943.

One of the most neglected problems, neglected out of necessity, is the physical and mental effect of a defensive position on the individual soldier. In any defensive position, the men must remain for long periods at their assigned stations. In a position where the enemy is in close proximity (300 yards to 600 yards) it is necessary for them to remain in their slit trenches throughout the hours of daylight, and to stay in the immediate vicinity at night. The necessity of being constantly alert precludes the possibility of sleep at night, or of much diversion during daylight.

A stable defensive position requires an entirely different type of training and organization than is required for offensive action. Riflemen should be trained to man machine guns as it will ordinarily be necessary to employ more than the ordinary number of machine guns. It is also valuable to have rifle company personnel trained in fire adjustment methods. A larger, more comprehensive communication system is used: An infantry battalion may well use as many as 40 telephones of various types.

Improvement of positions must be continuous. Each man must have a fox hole (standing-type) for fighting purposes. A slit trench is much less satisfactory and offers less protection, although it is advisable to have one in the immediate vicinity of the fox hole, for the man to sleep in. In one instance, men were using slit trenches which were covered, except for the forward end. The position was penetrated by an enemy patrol, but our men found they could not fire to the rear without getting out of their trenches.

Another position defect commonly found was the distance between barbed wire and forward positions. Wire was sometimes 150 yards from forward positions, whereas 75 yards is probably a more effective distance.

It is of utmost importance that all friendly minefields be accurately charted, and the sketches be put down to companies. If this is not done, men and tanks will be lost."

Second Lieutenant LAWRENCE A. GAFFNEY, 168th Infantry.

"On 5 July 1944, Company "B" was moving forward to some high ground about 1300 yards South of CASTELLINA. Our mission was to organize and hold about 1000 yards of this high ground.

The company commander put the 1st platoon on the left, the 3rd platoon on the right and held the 2nd platoon in the rear as a mobile support. The light machine gun section was put in the center of the company line of defense and the mortar section was placed in rear of the high ground and about centered the company.

A machine gun platoon from Company "B" reported to us as we were about to go into position. Because it was rapidly becoming dark the company commander put one section with each of the front line platoons and told us to select positions for them.

The first platoon, of which I am in command, was a short distance to the rear while I, with my messenger, started to select positions. I decided to place the squads well forward on the slope and form combat strong points across the front. The area I had to

cover was so great that I could not hope to have a line of men. I found three places from which we could cover our entire front by fire and after sending for the squad leaders, had them place their squads in these positions.

The heavy machine gun section came forward and I split it, placing one gun on the left where they could cross fire with the unit on our left (Company "L", 135th Inf) and cover our front. The other I put on the right where it could cover our front and also cross fire with both the light machine guns on my right and the other heavy. The hill sloped very uniformly and I estimate that they had grazing fire for 400 yards in all directions but our right, where a nose interfered with our fire.

We outposted each of the strong points, arranged visiting patrols, and spent all night resting and waiting for an attack. There was no enemy activity during that night.

The next morning about 0900 hours enemy patrols of about five or six men began hitting us at several points in the company line. The squad leader of my third squad came running to my OP, after one particularly heavy attack on my right and reported that his squad was pinned down by fire and one of our light machine guns had been firing on it. We investigated the machine gun first and found that an enemy patrol had knocked it out with a hand grenade and, we believe, fired it for a while before being discovered and driven off.

We next took half of the squad forming the center strong point and placed them with my messenger and radio man where they could cover us and the trapped squad. The squad leader and I then proceeded down to the squad. On the way we shot two Jerries and with the help of fire from the covering force forced three more to surrender. Several others got away. Upon looking the situation over I believe that the enemy sneaked through the gap created when the machine gun had been knocked out, and hit my squad on the right flank.

In this case the squad leader's courage in contacting me when his squad was trapped probably saved many lives and saved the company from serious trouble. For the type of terrain we were in our frontages were much too wide and we had a great deal of difficulty defending them.

Another thing which I believe should be taken into consideration is that a couple of weeks of combat weakens a platoon considerably and it is difficult to execute a mission that is normally assigned a full platoon with it."

Sergeant RICHARD JOHNSON, 135th Infantry.

"We had been attacking day after day with our casualties mounting.

The objective one afternoon was to attack and clear three buildings, and hold. The attack went beautifully with supporting light tanks and mediums behind them. Our objective was reached in less than 15 minutes. Our mistake was in setting up

a "half-baked" defensive behind the houses. Within an hour a small force of Germans counterattacked and was upon us before we knew what was happening, which resulted in a hasty withdrawal and a completely disorganized unit."

Captain REID B. HUFF, 135th Infantry.

"In temporary defensive positions be sure that outposts are established far enough away from main body so that sufficient warning may be given if outposts are attacked.

One platoon of Company L was captured at MONTIQUILA, Italy because the outposts were less than 50 yards from remainder of platoon and timely warning could not be given to alert the platoon."

i. CP - OP Operations. The CP is the center of all operations and the OP is a business establishment for the purpose of observing and destroying the enemy. Established observation posts should not be subjected to the carelessness of commanders and their staffs.

Major ALLISON A. CONRAD, 135th Infantry.

"Control of movement in and around an OP must be continuous. It is fatal to relax this caution for one moment. Even in a unit as battle-schooled as this one, I have seen occasions when excessive movement around an OP (and in one instance, a CP) brought immediate enemy fire which caused unnecessary casualties. Visiting firemen who insist on driving up to your front door instead of parking at a reasonable distance and advancing on foot under cover are the worst offenders. Vehicle dismounting point must be clearly marked and guarded twenty-four hours a day. Less movement at the OP means less work for the GRO."

Technician Fifth Grade ERNEST J. LANGIE, 135th Infantry.

"While under combat fire, one can never feel too safe. In one instance our battalion had moved up and relieved another unit and after the unit had oriented us as to the situation at hand we settled down for the night feeling quite safe as they had informed us that the enemy hadn't shelled the immediate vicinity of the CP. They had been there for 30 some days without their CP being shelled. Well, the next day the 1st Sergeant and other non-coms commenced to instruct the men not to do any unnecessary walking around and not to hang out their towels, shirts or anything that could be observed by the enemy.

We stayed in this CP for two weeks without drawing a single shell, but finally a few of the men apparently forgot or disregarded their instructions and hung out a couple of white towels to dry, and sweat shirts also. As a result our CP drew enemy artillery fire, costing the lives of three men."

First Lieutenant HAROLD C. BISHOP, 168th Infantry.

"Battalion and company CP's, in stable defensive positions, can and should be set up in businesslike style, even if they are underground. Adequate files should be set up for the abundance of intelligence and operational material, such as patrol reports, overlays of friendly and enemy dispositions, counterbattery and counterattack plans, etc. Filing systems must be set up immediately, or valuable material will be lost."

Private First Class WILLIAM WOODROW, 135th Infantry.

"From my experiences as an F. O. in an infantry combat battalion, I have found out several important points through sad experience. First of all great care must be taken if approaching an OP in the daylight; to keep from being observed by the enemy. He usually has all the observation anyhow, and if he sees you he will fire on you, no matter how few or many there are in the party. Once the OP has been established, don't disclose your position. If you can see the enemy, he certainly can see you. Do the things you have been taught to do when observing.

Here are two incidents which actually occured in combat. Three men were in an OP on the side of a mountain. The only cover was a small wall about three feet high and six feet long. One man stood up to urinate. Within three minutes a dozen rounds fell in the general vicinity. He not only endangered himself, but also his buddies. Today that man is dead. You see, he made one more mistake. A sergeant was observing from a window in a prominent building. Some wise guy in the next room began to snipe at some Germans much too far away for any accuracy, but he caused enough commotion to draw attention to the area. The sergeant moved quite close to the window to get a better view and was shot through the eye. The sergeant was at fault for getting too close to the window, but sniping from an OP should be altogether discouraged.

Use your head. Information is no good if the informer cannot deliver the information to the source who can make use of it."

i. Air - Ground Liaison. Close support aerial bombardment has not in all cases proved completely satisfactory, but the potentialities of the weapon for infantry support are great.

Lieutenant Colonel MARK T. MARTIN, JR., AC of S, G-3, 34th Infantry Division.

"I reported on 6 April 1944 for duty with 445th Bombardment Squadron (M), 321st Bombardment Group (M).

During tour of duty I attended three 'briefings' prior to missions, accompanied one mission to its target as a passenger in the leading element of three planes, accompanied the Squadron Commander on a 'chaperon' flight to the Bomb Safe Line on a second mission and took part in informal discussions with the Squadron

Commander and the 32lst Group Operations Officer.

Observations made during this brief period suggest that the present exchange of Air and Ground Force personnel be continued and that, when practical, efforts be made to assure that officers be exchanged especially during periods when air operations are in Direct Support of Ground Actions. It is believed that air corps officers generally must operate over such extensive fronts that it is not possible for them always to be familiar in a sufficient degree with the terrain immediately to the front of our infantry. This is especially true, it would appear, since most flying officers are Lieutenants or Captains with a comparatively short period of training in map and aerial photo reading; a circumstance no less true in the Ground Forces. Unlike ground officers, who may spend a considerable amount of time in map study to determine locations, however, Air Corps officers are permitted comparatively a few seconds to recognize their target and to get away their bombs.

It is appreciated that upon many occasions under conditions of fluid warfare the exchange of Air and Ground personnel before missions is impractical. The indicated method is recommended for trial prior to resumption of the offensive in the present sector, the ground plan having been formulated and the initial allotment of Air Support having been made:

It is suggested:

(a) That Flight Leaders and Navigators visit the Division to be supported prior to and during air operations and that this personnel be oriented on the ground and by flights in Division air OP's.

(b) That Ground Officers from the sectors concerned visit the Air Groups and assist in briefing Flight Leaders and Navigators accompanying flights in an advisory capacity if that be desired.

(c) That one navigator and one flight leader from each Air Group visit the division which is to be supported prior to beginning operations.

(d) That one division staff officer visit each Group which is to fly in support, being present for the briefing prior to initial missions.

(e) That the exchange of officers be made once each two days during the period when especially close support missions are desirable."

An attempt in this theater has been made to develop close liaison with the establishment of 'Horsefly', a system in which cub planes were used to orient bomber pilots over the target area. It was discarded as unsatisfactory after losing several cubs and because the Air Corps did not consider the targets remunerative. Division observers report that careful briefing is the key factor, and the pilots report that to supplement briefing seeing the ground prior to the mission would be most helpful. This careful briefing coupled with visual aids such as colored smoke over the target has proved successful.

First Lieutenant BURTON H. ISENBERG, 168th Infantry.

"In January 1944 the 168th Infantry was in the vicinity of CERVARO, after making spectacular progress from just north of VENAFRO. On 11 January I was on an observation post on Hill 496, approximately 1500 yards east of CERVARO. On the morning of the 11th, we received word that, at 1200 hours the Air Force would strafe and bomb the town of CERVARO; also that friendly artillery would lay red smoke markers on the target to aid the Air Corps. That morning I observed enemy activity in the town of CERVARO. I adjusted 81mm mortar fire on enemy personnel moving about the town. I also observed patrols of our regiment moving about in the olive orchards north and east of the town. At approximately 1155 hours our own artillery fired red smoke markers on the town. Exactly at 1200 hours the first formation of A-36's appeared from the south and circled around to our rear and started their dive on CERVARO from the east. They strafed and bombed simultaneously. After the first flight had passed over the target they swung around to the south and circled back to the east gaining altitude. They then made another dive on the target, but this time, they strafed only and did not bomb. Each succeeding flight went through the same procedure. The close air support attack on CERVARO lasted for approximately one-half hour. All bombs were released with extreme accuracy and found the target with maximum effect. Aided by this bombing, the second battalion of the 168th Infantry attacked the town. On the following day CERVARO was ours."

Sergeant JAMES W. STAPLETON, 133rd Infantry.

"Air support is a very important factor. If our strafing effects Jerry as his does us, our planes do not necessarily need to cause casualties. It also boosts our morale to see our planes overhead."

k. Cover, Concealment and Dispersion. The basic principles of the subject matter have been thoroughly discussed in the field manuals irrespective of branch. The relative absence of the German Luftwaffe and the apparent shortage of enemy artillery ammunition as the campaign progressed created at times a a false sense of security resulting in laxness and sometimes outright carelessness.

Captain HORATIO N. LONG, JR., Headquarters 34th Infantry Division.

"It is unusual for the enemy to call artillery or mortar fire on well-dispersed troops in a stabilized situation. Too often a sense of false security descends upon us after a lull in enemy fire and we begin to group up forming targets for fire which is brought down with devastating effect.

During the attack at S. MARIA OLIVETO, 4 November 1943, the commanding officer, Company ___, ___ Infantry assembled his platoon leaders and key NCO's to plan the continuance of the attack.

Shortly after assembling, a heavy enemy mortar barrage fell upon the position resulting in all of the officers and the majority of the NCO's becoming casualties. With no leaders the entire company became disorganized and withdrew."

Second Lieutenant CLARENCE E. SPIKE, 133rd Infantry.

"It has been my experience all through the Italian Campaign that the American soldier is inclined to 'bunch up' in groups. The doughboy of this war seems to think that as long as he has a number of his companions close to him he is fairly safe.

In October 1943 we were advancing on BENEVENTO, Italy, in the approach march. It was a fairly dark night and the men were walking on each others heels when they should have been spread out. Suddenly, 'Whoom' - a large caliber shell hit the column and wiped out the majority of a whole platoon of Company "K". Had the men been at proper interval damage would have been a great deal less."

Staff Sergeant HAROLD F. MUSCHAMP, 133rd Infantry.

"One lesson I have learned in combat is 'there is no fox hole better than the one you are in'."

Technician Fourth Grade JOHN MAYORCHAK, 135th Infantry.

"Some of my buddies and I were injured at the third crossing of the VOLTURNO. We were behind a hedgerow when Jerry opened up. The first shell wounded many of us slightly. I went for my fox hole and some of the others did likewise, but the remainder took off and in Jerry's next barrage the majority of these were severely injured. A shell landed within 6 feet of me, but my fox hole paid very good dividends."

Sergeant SHELDON G. JOHNSTONE, 135th Infantry.

"Those who were on the ANZIO Beachhead soon found that unless both men and positions weren't kept out of sight or camouflaged so as to make it hard or impossible to be seen they wouldn't last long. We had a very good example of how important camouflage is.

Our first positions were sandbagged positions on top of the ground because of wetness. The men who were there before us had taken away their nets, which were the only camouflage possible in that case. Our nets were unsuitable for the terrain and could be used merely to break the outline. We received direct fire. Later, we put our own position in an alfalfa field. We used alfalfa along with the nets and tested the job by going only a few yards away. We worked on it until satisfied that no observation post on the Jerry side could possibly pick us out. The result was that, regardless of all the shelling they did at nearby roads, gun positions, houses, etc., we never received a close round."

Private First Class THOMAS M. FALZONE, 133rd Infantry.

"I was trapped with our platoon leader in a small ditch. I had to lay flat on my stomach to keep under cover of the machine gun firing at us. Everytime I moved while crawling backwards I stuck some part of my body up and was fired upon. I laid in that ditch for 2 hours trying to crawl back when my platoon sergeant yelled to me directing me out of the trap."

Corporal HAROLD B. GAARD, 135th Infantry.

"At CASSINO one night we moved our anti-tank platoon forward, fairly close to the front lines. Our guns weren't needed that night, so we dug in behind a six-foot bank. There were trees on top of the bank, so we dug down and under the bank because if shell had hit in the trees it would have been the same as aerial bursts, and by digging that way we also had overhead protection. Machine gun bullets were buzzing overhead, which gave us more willpower to dig.

A passing soldier got curious to see what was going on. He grabbed a pair of field glasses and crawled on top of the bank. Instead of being careful and getting in a shady spot or by a tree, he got right in the open in plain sight where the sun reflected on the glasses. Someone cautioned him and he had just got into a fox hole when Jerry threw in a barrage. Thanks to the good fox holes no one was seriously hurt, however, our equipment lying outside of the fox holes were torn to shreds."

1. Infantry Weapons. The employment of infantry support weapons, dictated by terrain and rapidity of movement, has always been a subject of controversy within the Division. The suggestions and ideas submitted herein represent the thought of all weapons men based upon many months of actual operation against the enemy.

(1) Machine Gun.

Staff Sergeant RICHARD W. FREDRICKSON, 133rd Infantry.

"As a machine gun section leader, it has been many times my assignment to be attached to a rifle unit, sometimes unaccompanied by an officer. Although intending to imply no criticism of the rifle unit's judgment or any inability on its part, I have found that occasionally a clash is unavoidable concerning certain decisions; sometimes the rifle unit commander is not thoroughly acquainted with the tactical employment of heavy weapons. Again, a difference of opinion on a minor matter; usually as a non-commissioned officer my opinion holds little weight in such cases. I have learned that an NCO with a section attached to a rifle unit must be doubly aggressive, come out with his decisions or opinions, and many times act on his own initiative or judgment before receiving orders, as it is natural that sometimes he will be forgotten entirely or neglected; especially in the attack."

Staff Sergeant LOUIS CARSTENS, 135th Infantry.

"We have found since early in the African Campaign that if we are in close support of a rifle platoon and are called on to fire a target such as a 'kraut' machine gun that not more than 2 men carrying the gun and a chest of ammunition should crawl to a suitable position from which to fire to try for accuracy and surprise. After firing we then move back soon as possible to cover as in most cases. Jerry soon covers the area with fire. We have done this on numerous occasions with good effect. Shortly before LEGHORN, we picked up a 'kraut' machine gun by sound and observation that had a rifle platoon pinned down. We watched the position until the 'krauts' seemed intent on something else to their front, then quickly set up our gun and fired several long bursts which silenced the 'kraut' gun. Our gunners immediately went back to better cover. In a very short time 'kraut' fire was placed on our vacated position. Surprise fire on a counterattack by waiting until you can fire on some of the 'krauts' further back first has proved to be quite demoralizing, particularly if you are firing from a flank as we had occasion to do when Company "A" on our left was being counterattacked. The 'krauts' seemed at a loss what to do and were soon dispersed by our own artillery fire."

Captain JACOB G. GEIER, Headquarters, 34th Infantry Division.

"Combine the light machine gun and BAR best features to make a light machine gun (shoulder weapon, belt fed, employing a bipod) that can be carried by one man. The German machine gun 43 is a close approximation as far as looks are concerned but the new design should retain the range and accuracy of the light machine gun. Eliminate the BAR and LMG from the infantry company and give each squad one LMG of the new design. Reorganize the weapons platoon to include four 60mm mortars only. Two to be employed on the attack, four to be employed on the defense."

(2) Mortars.

First Lieutenant ROBERT B. GOSSETT, 168th Infantry.
First Lieutenant RALPH O. HOVDEN, 168th Infantry.

"Sight, M-4 - The present 81mm mortar sight M-4 is adequate and is a good sight. However, there are two adaptations which would be helpful. First, a mirror attachment similar to the German 81mm mortar sight to enable the gunner to sight on an aiming point to his rear. With mortars, just as with artillery, the greatest accuracy of fire is obtained when the aiming stake is farthest from the gun. Because mortars are normally in positions in defilade or in back of buildings, it is often necessary to have the aiming stakes close to the gun, thus cutting down our accuracy. With the mirror attachment it would be possible to place the aiming stakes some distance away to the rear or even to the flank of the

gun. Second, a night lighting device, both for the sight and for the aiming stakes. At present, we are improvising with flashlights, but they cut down the accuracy and speed of the gunner because the gunner must hold one light in his hand while operating the gun with the other. A night sight similar to cannon company would be suitable. Occasionally one of the micrometer knobs 'slip' and do not give the true reading. Usually the gunner detects the faulty sight because the knob turns too easily but sometimes not before having fired part of the mission. Possibly a lock washer that would hold these knobs secure could be made.

Fire Control - We have been very successfully using a method of fire control and direction similar to that of an artillery fire control center. Our first attempt with this method was an experiment at ANZIO Beachhead and it proved itself so effective that we have been using it ever since. The only two items necessary to operate this C.P. set-up which are not T/E are 1/25000 artillery grid sheets and a 1/25000 rangefan.

As soon as our guns are in position, the position is plotted on the grid sheet and a base-point registered for all guns. It is then unbelievably simple for the platoon C.P. to fire on any given coordinate quickly and accurately by using the range fan which immediately gives the true range of the target and correct deflection from the base-point. Therefore, any person in the battalion can call in the map coordinates of a target and the target can be fired accurately and immediately. This method has been extremely valuable in firing targets where observation was difficult and even more so for night firing. All of our NCO's have worked with this method and are thoroughly trained to take over operation of the C.P., if the platoon sergeant should become a casualty."

Lieutenant Colonel JOE L. BOURNE, 168th Infantry.

"It is suggested that at least a platoon or company of the chemical mortars (4.2) be provided for each infantry regiment while in combat in terrain such as we have in Italy, and for terrain that we will undoubtedly have to conduct future operations over.

The chemical mortar proved itself a highly valuable weapon on the ANZIO Beachhead. It has greater range than our 81mm mortar. The result of its fire is highly demoralizing to enemy troops. German prisoners refer to the 4.2 mortar as the 'silent death', because the fragments of the shell apparently splinter up much finer than our 81mm mortars and a small sliver can pass through a man's body almost without leaving a mark. The Germans do not like the chemical mortar.

It is realized that the chemical mortar is an organic part of our army chemical warfare section, but we are firmly convinced it can be used to great advantage with the infantry regiment either attached or preferably to become a part of the T/E organizational set-up of an infantry regiment."

First Lieutenant DAVID B. AYRES, 135th Infantry.

"The 60mm mortar is a fine little weapon. It would help if there were smoke shells available; they could be issued on the basis of two per mortar in the basic load."

Captain HUGH S. JACOBS, 133rd Infantry.

"Mortars have not been used as much as they could be, especially 60mm. I found the following system greatly speeded up use of my mortars: In rifle company command group, I always had the mortar section sergeant and one man with a roll of 130 wire. The mortars usually followed the attacking platoons and when one of the leading platoons was held up, while I pointed out the target to the mortar sergeant, the wireman was rolling wire back to the mortars. By the time the sergeant had figured his range to the target, the mortars were in communication with him and the first round on its way. This saved valuable time, in that I didn't have to send back for the observer.

The 60mm illuminating mortar shell was found to be by far the best flare for night work. In defensive positions at night, they should be sighted so as to cover the entire front with flares and the reserve company mortars should be attached to the AT guns so as to afford illumination for night firing against enemy armor. We tried this in practice and found it to be very successful."

Sergeant GEORGE E. CHRISTENSEN, 133rd Infantry.

"The 60mm mortar is of very little value against well-prepared positions. When setting your gun up, never set it up on the forward slope of a hill, nor in a draw as these are usually zeroed in by enemy artillery or mortars.

Whatever you do use a little common sense!"

Sergeant LOWELL W. HARTSFIELD, 133rd Infantry.

"During our last phase of combat, the 60mm mortar section, of which I am a member, went into the line under a new set-up which was worked out within the platoon by the platoon leader. This was based on former combat experience and proved to be highly efficient and highly successful.

The first and second squads of the section were equipped as they had always been. That is, they carried two mortars and six bags of ammunition. The third squad, however, carried no gun but carried four bags of ammunition while the squad leader carried cleaning equipment consisting of a cleaning staff, waste and rag, and oil. It was also the responsibility of the third squad leader and his squad to keep the gun supplied with ammunition during an action by bringing ammunition from the supply point to the guns whenever it was needed. Thus, it can be summed up by stating that instead of the usual T/E of three guns and nine bags of ammunition,

our section went into action with two guns and ten bags of ammunition. OP men came from the third squad."

First Lieutenant EMANUEL NATHAN, 133rd Infantry.
Staff Sergeant GEORGE J. FRENCH, 133rd Infantry.
Sergeant DARWIN A. WELLS, 133rd Infantry.
Sergeant JAMES A. CHANCE, 133rd Infantry.
Private First Class CHARLES H. HESOTIAN, 133rd Infantry.

"Experience has taught us that the enemy will counter 60mm mortar fire with much larger guns, making it a must to have alternate positions at all times. Always leave the position you have just fired from immediately upon firing your mission and move to the alternate. The movement must be done rapidly for the enemy is quick to return our fire.

When good alternate firing positions are not available, positions affording good cover should be found, and when a fire mission is completed move to them. After the enemy has fired return to your original position and fire the next mission, repeating the same procedure after each mission. This method has been used very effectively, especially when we were in the town of CRATOLA along the ARNO River. In three days we fired more than 1,000 rounds and received some very heavy counter fire, including 170's. One of our guns was knocked out and one sight, but we had no personnel casualties."

(3) Cannon. The infantry cannon companies of this Division have preferred and are equipped with the 75mm Pack Howitzer. Having a greater range and more maneuverability than the present 105mm Howitzer, M3, it has made up for its lesser punch by greater accuracy and rapidity of fire.

Staff Sergeant KEITH R. MENMOLA, 135th Infantry.

"In my opinion the 75mm Pack Howitzer is the gun for all cannon companies. This fact can easily be confirmed by simply checking our records."

First Lieutenant DEAN C. FELLOWS, 135th Infantry.

"Teach the infantry regiment how to shoot artillery. Cannon company job is to support, but let the infantry help. Teach FO method of conduct of fire. Take the Doughboy out to service practice, make each pair of eyes a FO. Time fire has been very satisfactorily adjusted by the infantry line officers in this regiment during combat.

Keep cannon company under a central control. Why have half the guns idle when they could be used. A simple FDC will work wonders. The pack 75mm Howitzer has 2000 yards more range and 200 mils more elevation than the 105mm M3. 2000 yards means the difference of covering the sector or not. This was true at MONTIQUILA,

PANTANO, CASSINO and ANZIO. The shell is lighter but you can carry more of them. High angles of site are very frequent in the mountains. At PANTANO they ran as high as 150 mils. 75mm also has a flash hider that works. We have shot when the field artillery couldn't. The pack can be taken down into at least eight pieces and weighs 1000 pounds less than 105mm. We should have split trail 75mm Pack Howitzer.

Give us the 2½-ton 6x6. It will go through the mud and up the hills. It will pull out where the 1½-ton vehicles will be left. If you can't get into position you can't shoot.

Make sure the Doughboy knows how to communicate with the cannon company. With the radios now in the regiment it is simple. Use wire where you can. Lay double lines when you can. OP lines give a more reliable fire service. Also it is better for security sake. Hills play hell with the 300 series radio. Radio was all that was used at PANTANO, CASSINO and LANUVIO."

First Lieutenant HARFORD C. EVE, JR., 135th Infantry.

"As soon as the battalion with which you are working takes a new position it is our job to register several points around the position at once and to get concentration numbers on the points. If you do this it will enable you to get fire on almost any point in the battalion sector in about one-half the time it would take if you called for the fire by co-ordinates. This procedure has helped me quite a few times in counterattacks."

Corporal MORRIS WILSON, 135th Infantry.

"I have found it is a good practice when in the field to always retain enough powder charges in a convenient place, preferably an empty shell case, in order that no time be lost on a new fire mission in which another charge or two is required. If we are firing say charge one and have twenty rounds prepared to fire, I make sure my ammunition man has twenty charge two, three and four powder bags where they may be gotten on an instant notice. Then even on the darkest night it's a simple matter to replace them in the shell casing if needed, and get the rounds out there in the shortest possible time."

First Lieutenant EBDELL R. O'BRIEN, 133rd Infantry.

"One thing I have learned is the uncertainty of the reported positions of front line elements. This is true more so in hilly country than in more favorable terrain. In the campaign beginning around the first part of July, through the hills to the plain before the ARNO River, I was an observer for a company of 75mm cannons. Time and again units on the right and left reported themselves ahead of where they actually were. By taking their given positions and allowing required safety margin for firing a lot of

enemy targets on our flanks, that were harassing us and could have been neutralized, were refused."

(4) 57mm AT Gun.

Private First Class MARTIN F. VOIGHT, 133rd Infantry.

"The wheel segments on our 57mm AT guns should be taken off as they catch communication wires and it has been proven that with the brakes set the gun can be fired just as accurately."

Captain EDWIN LEWIS, Headquarters 34th Infantry Division.

"57mm AT guns can do a great job on machine gun emplacements as direct support artillery if we had more HE ammunition. About 60% AP and 40% HE would be right."

First Lieutenant SIGURD OLSON, 133rd Infantry.

"I believe that gun crews should be trained in riding the tanks with the AT guns in tow, and the ammunition and equipment on the tank. This affords a means of getting the guns into position when it is impossible to get there with a truck. Training in our rest areas has shown us this can be done quite easily. The lesson was learned at CECINA during the day of 1 July. Company "F" of this battalion assaulted the town, riding on and advancing with the tanks. They by-passed some enemy machine guns which remained silent when the tanks were near, but which opened up again when they had passed. Their fire swept the only road open into the town and then fired on any movement. If we had been able to go in with the tanks we could have given the rifle troops some badly needed AT protection. As it was, we were forced to wait till the guns were silenced, which was about dusk, before we could get into the town.

I believe that the gun crews should be trained in night firing with the aid of 60mm flares. At LARI on 16 July our guns were far forward and sighted to cover from the flanks the two roads leading into our battalion sector. That night enemy armor was heard moving along these roads but the gunners were unable to fire because of darkness. With this thought in mind, we worked up a method to enable us to fire at night. The guns should move into position during daylight, if possible, to give the gunners a look at the terrain in front of them. Coordinate fire with one of the 60mm squads so they will be able to fire their flares directly over the target upon call. If firing of these flares is continued at the rate of one every 20 or 30 seconds the target area is very well lit up and the gunners, during our exercise, were able to see the cross hairs and lead markings in their sight very plainly. They were able to pick up and track, successfully, their target. The distance to the target was about 600 yards and the target was a peep moving across the terrain. The gunners and squad leaders all agree that the method is simple enough and that it is workable."

(5) Grenades.

First Lieutenant JOHN C. AILES, 133rd Infantry.

"It is my opinion that more emphasis should be placed on the use of the rifle grenade. On about 28 June, near CASTAGNETO, a right flank platoon was partially surrounded by about 50 Germans armed with machine guns, machine pistols and rifles. This platoon was in a dry river bed, and the surrounding country was very flat with a network of drainage and irrigation ditches that were somewhat grown up with brush. The Germans were about 100 yards from our positions so that we were unable to employ our mortars. The platoon had no grenade launchers, and was unable to dislodge the Germans by small arms fire. It is my opinion that these machine guns could have been knocked out or forced to withdraw if rifle grenades had been used on them."

Captain ALBERT J. HOIHJELIE, 135th Infantry.

"A white phosphorus rifle grenade can be made from a regular AT rifle grenade and a WP hand grenade. These were used to a good advantage at ANZIO. They should be made by an ordnance company."

m. Infantry Medical Detachment.

Captain ALEX BROWN, MAC, 133rd Infantry.

"The battalion Aid Station marks the point where first echelon medical service ends and second echelon medical service begins. In peacetime on maneuvers, in barracks life, and during rest periods, this is a logical definition of activity. In combat, however, this system will not and has never worked out. Collecting companies, as constituted, do not perform the function outlined for them in the field manuals. In order to serve the troops most efficiently within the framework of the present T/O and tactical doctrines, the following has been necessary:

(a) Close liaison between the regimental surgeon and the collecting company commander.

(b) Ambulances may be employed as far up as battalion aid stations, or it may be impossible to get an ambulance to within miles of the battalion aid station. Each of these situations poses a different tactical problem and changes the relationship between first and second echelon medical services, and thus changes the responsibility of the regimental surgeon and the collecting company commander. The tactical situation itself changes rapidly and for each battalion aid station, the situation may be different. Thus it can be seen that the old division between first and second echelon medical service is an arbitrary one. In the past, much disagreement and disharmony developed because of this. The real separation between first and second echelon medical service has been found to be at that point where a casualty ceases to be

transported by hand and can be put into an ambulance. No matter at what point along the route of evacuation this occurs, it is a clear-cut and definite junction. The collecting company thus becomes in reality, an ambulance company. It brings its ambulances as close to the field of battle as possible. The regimental surgeon and his assistants thus have the responsibility of evacuating the battle-field, rendering the vital medical aid necessary at the aid stations, and then bringing those patients to the waiting ambulances.

In order to perform this job, the regimental surgeon must have in his control all the litter bearers normally assigned to the collecting company, plus whatever additional litter bearers he can obtain. He must make a thorough study of the tactical situation and an accurate estimate of what will be needed and then act accordingly, and he must do this, not after the casualties occur, but many hours before.

This Division has fought in mountainous terrain during most of the Italian Campaign. On many occasions, it has been impossible to bring an ambulance anywhere nearer than 2 - 5 miles to the battalion aid stations for weeks at a time. It has been necessary to organize litter relays consisting of as many as 16 relays, employing hundreds of litter bearers, between the frontline and the waiting ambulances. On every one of these occasions, it has been the regimental surgeon and his assistants who organized these relays and kept them functioning, using the litter bearers assigned to the collecting company whenever he saw fit. We of this regiment have been fortunate in developing a close liaison with our supporting collecting company so that the function of casualty evacuation has proceeded smoothly and efficiently.

If the regimental surgeon had taken the attitude, "Well, the FM says that the collecting company will evacuate the aid station", and then had sat back and waited for them, there would have been literally hundreds of patients still lying on the mountain sides of Italy or else evacuated by the GRS. The 3rd crossing of the VOLTURNO, the battle of Mt. MARRONE, the hills above VENAFRO, and the advance from GROSSETO to the ARNO are illustrations of the above."

First Lieutenant ROY L. BATES, MAC, 133rd Infantry.

"It is a definite morale factor to infantry troops to know as they go into combat that if they are wounded they will not have to lay out on the field of battle for a long period of time. The average infantryman has a fear of this which is so strong within him that the minute he is wounded he thinks only of yelling 'medics' or 'litter squad'."

Technician Fourth Grade EDMOND E. CABANA, 133rd Infantry.

"Usually in an aid station when a casualty occurs confusion arises and about five men try to do the job of 2 men. In our aid station a certain number of men are on duty at a certain time. If

there are more patients than can be cared for by the men already on duty the other men are called to help during the rush. In this way we avoid much confusion."

Technician Third Grade CHESTER L. MANLEY, 133rd Infantry.

"While a technician in a battalion aid station I have observed many times the necessity of having a minesweeper available to the battalion medics to aid in the evacuation of soldiers wounded in mine fields.

A good example of this situation took place 6 November 1943. Two soldiers were severely wounded in a minefield. Three litter bearers were sent into the minefield to bring them out. While in the act of doing so, two of them were also severely wounded. Rather than sacrifice more litter bearers in the attempt to bring them out an order was sent to the battalion P and A section for minesweepers who were at the time unavailable because of other work. There was a delay of an hour before a path to the wounded could be cleared. All of this activity took place within 200 yards of an aid station where the wounded could have received prompt attention if there had been minesweepers available."

Captain HORATIO N. LONG, Headquarters 34th Infantry Division.

"A man administering aid will usually not draw fire even though he be in open terrain. On the other hand, three or four men gathering over a wounded companion often results in the entire group becoming casualties."

n. Remarks (Misc.)

Staff Sergeant JOHN T. COWELL, 135th Infantry.

"There have been too many instances of rushing into a situation without full knowledge of what is happening.

We have experienced situations where a little more time and preparation would have saved time, material and lives.

For instance: Improper reconnaissance causing a battalion on trucks, to detruck and fight for an assembly area.

Or: The different weapons not having time to reach their designated areas preparatory to the attack. Then the attack is mixed up, and the jump-off time has to be set back as much as six or eight hours.

Or: The reckless way in which mined areas are treated. We have seen vehicles and equipment blown up on roads and trails that are plainly marked with the German mine sign. If a little caution is taken, it can be easily determined whether the road has been swept or vehicles have already traveled it.

Plenty of time for reconnaissance, preparation, and passing on to the troops all information available, will insure a better chance of success. Even if the situation is pressing, "Look before you leap"."

Captain RICHARD F. WILKINSON, 133rd Infantry.

"Stocking swivels should be removed. They catch in the brush and add to the noise in night attacks.

The use of draws as routes of approach causes many casualties from artillery and mortar fire in mountain fighting. By using mountains and hillsides selecting the best cover few casualties resulted from artillery or mortar fire. As most draws are covered by artillery fire they make poor routes of approach.

It is best to carry mortar bags over your shoulder as it is easier to hit the ground carrying them that way.

Small arms fire causes few casualties so look up as often as possible to see what is going on. When your head is down you see nothing -- when it is up it is only two inches higher, you can see the situation and protect yourself and your comrades."

Sergeant HARRY C. VANEREK, 133rd Infantry.

"In being up on the lines I have witnessed many fellow GI's in action. In one case we were going through the brush in the mountains and a machine-pistol opened up on us from our flank and we all hit the ground. We had a few new men with us that had just come in. No one had to tell them to get down, they just did. I asked one later how come he got down and he said it came natural. He took cover and good cover. He got behind a big rock, but the trouble came after that. He got down and then started trying to figure just where the fire was coming from. He went around the rock twice, until I finally got close enough to point out the direction in which the bullets were coming from. I, myself had the same experience when I first came in and had to learn the hard way.

What I think is they should cut down on running these 'Keep down courses' and give the fellows in the States more of 'crack and thump'. It's even hard for an experienced soldier to pick out the spot where the fire is coming from without assuming that new fellows can."

Staff Sergeant LESLIE AUTHEREITT, 133rd Infantry.

"One of our men is dead today because he picked up a German machine gun after we had driven off the enemy and he carried it to our assembly point on opposite edge of the hill where he fired it to see if it worked. A German, or American tank heard it and zeroed in on him. The second shell that came in exploded him all over the place.

Our squad has noted an interesting fact about some of the minefields which the Jerries have left fully marked with their signs and wire. These spots were tall with unmowed grass, whereas the grass in the unmined portions of the same fields was mowed. Perhaps sometimes this would be a valuable bit of knowledge for a scout advancing in an area where the Germans have had time to remove their 'Achtung, Minen' signs and barbed wire, watch out for tall clover fields."

Second Lieutenant DEAN P. HAMILTON, 133rd Infantry.

"My company was ordered to advance one afternoon and along with the order came information that the high ground to our left was occupied by friendly troops. We advanced with that assurance, and were caught in a heavy flanking fire from that supposedly occupied ground and had to withdraw or be trapped.

The lesson I learned from that one experience is never depend on reports, no matter how official, for protection of your flanks. Always take it for granted that both flanks are open and occupied by enemy."

First Lieutenant JOHN V. PENDERGAST, 135th Infantry.

"In several instances where my platoon was advancing through vineyards where visibility was limited to 15 or 20 yards, we forced the enemy to surrender even though we had never seen him. After being fired on from positions hidden from our view we would open up with every available weapon in that general direction and advance abreast in that manner. On several occasions the Germans waved white flags and came out with their hands up simply because we threw so much lead near his positions that he was afraid to expose himself to fire at us. A man also forgets about being afraid if you can get him to start shooting."

Technical Sergeant ROY WALKER, 135th Infantry.

"On the night of July 7, 1944, Company "G" attacked and took Hill 163, completely surprising the Jerries. We immediately began to dig in the hard rock for dawn would soon overtake us. Dawn broke and everything was quiet, too quiet.

To our front a single Jerry jumped up, started running like 'hell' to his lines. One of our riflemen fired and missed. Then another took upon himself to fire. Soon the whole company was placing its whole fire power on the single Jerry. The whole Jerry army let loose with small arms and 88's, resulting in many casualties and deaths just because we had given away our position, strength and fire power on a single Jerry.

We learned by experience to hold and control your fire until it is needed."

1. In most instances the Infantry-Artillery team has been developed to a fine point during current operations. It has been observed that newer units coming into combat either have not been aware of some phases of Infantry-Artillery coordination or have not had sufficient training herein due to ammunition limitations. The greatest single factor is the creation of an "esprit de Regimental Combat Team", where mutual confidence and respect have developed to a high degree. True, the realization of this esprit will come only after combat where true values are revealed, but much can be done in training to hasten its arrival. The lessons learned in training proved to be sound in principle and furnished the artillery of the 34th Infantry Division a workable basis for operation against the enemy. Throughout our part in the campaign in Africa and in Italy the varied situations that confronted us have resulted in the observation listed below.

a. Operations:

Captain WOODROW M. SMITH, 34th Division Artillery.

1. "Employment of Liaison Officers: In garrison too often the selection of officers for Liaison duty was not indicative of the importance of that particular assignment. In action the demands on the Liaison officers were such that only very reliable men were entrusted with the work. The Infantry commanders soon learned to rely on their artillery advisers for necessary fire support. Close cooperation was obtained without any impetus in the form of written orders. Liaison officers were called upon to select defensive fires, harassing missions, preparation concentration concentrations and to report Infantry dispositions. At times they were also called upon to adjust fire. Physical stamina is essential. The Liaison parties are at times obliged to operate under the most adverse conditions.

2. Forward Observers: The Artillery observers must be centrally controlled. We found it advisable for the Battalion S-2's to coordinate observation in their own combat team sectors, thereby eliminating the possibility of duplication of effort. New observers are prone to be over enthusiastic if not carefully instructed. It is a natural tendency for inexperienced officers to wander off on patrol missions, to become separated from their supported Infantry and thereby get out of touch with the situation. The observers are the only tangible touch you have with the front line elements. A forward observer who invariably gets pinned down by enemy fire is worthless. One Artillery Battalion lost two observers to enemy action in quick succession during the fight around MT. PANTANO. Investigation revealed that the two officers had placed themselves in positions where observation was secondary to personal defense. The next observer sent out was instructed to look for observation somewhat to the rear of the site of the two previous misfortunates. The support afforded our defending Infantry, was noticeably improved by this move.

3. Reconnaissance: Reconnaissances were as varied as they were numerous. In a rapid moving situation we found it necessary to maintain continuous reconnaissance by at least one officer in the Division Artillery. Many times the infantry pushed on just before dark, thereby necessitating a last minute move of direct support artillery.

4. Selection and occupation of positions: The ideal Fort Sill battery position can seldom be found. Many times the positions available are very difficult to occupy. Battery commanders in training should learn to tell at a glance if any given location will serve as a battery position. In the mountainous terrain around COLLI, pieces were winched into positions that presented almost insurmountable obstacles. In many instances the pieces were spread over a front covering 400 yards with each piece on a slightly different elevation. There is no get-rich-quick solution to occupation of a gun position. Frequently the positions that presented the most hazards during the actual occupation, later proved to be the most secure.

In Italy, many of our units put their CP's in houses. This practice is frowned upon in the texts but it worked out very satisfactorily in action. The reason is obvious. The houses in Italy are extremely sturdy and are so numerous that they have lost the lone-house-on-a-hill aspect. It is essential that an artillery CP be reasonably comfortable. Fatigue and discomfort breed errors in firing data. The artillery technician must do everything in his power to eliminate mistakes.

5. Observed fires: The forward observation method of adjustment was used almost exclusively. Observers too often fired for effect before a sure bracket was verified. This practice became sharply apparent at CASSINO, where the majority of the targets demanded precussion methods. There we found it necessary to insist on methodical adjustments. Another pitfall was the selection of targets. The inexperienced observer is apt to be stampeded into shooting at vague and unremunerative locations before he has taken time to carefully ascertain the most profitable course of action. When the supported infantryman are insisting on artillery fire in front of them the observer must make every effort to locate the offending resistance. Use harassing and area fire only as a last resort.

6. Unobserved fires: Preparation fires when properly selected and controlled are invaluable to the infantry attack. We found through practice that a series of phase lines, perpendicular to the axis of advance with selected concentrations in each phase, gave the best results. This type of preparation is easily controlled and may be changed readily to conform to the advance of the infantry. However, a dense preparation did not provide an 'open-sesame' to the infantry. At LANUVIO the Division Artillery shot a preparation through to completion and then received calls for fires in the initial phase line. The infantry was held up by close-in strong points which had weathered the preparation fire.

T.O.T. shoots are worth while when a quick and intense volume of fire is desired. This type of concentration covers an area of considerable depth and width and therefore cannot be used close in to friendly troops.

Interdictory and harassing fires are definitely worthwhile. At CERVARO, critical points were selected from map and air photo study and from S-2 reports. Dumps, unloading points, defiles, critical intersections on mountain roads, transfer points (truck to pack mule) were all covered. Expenditures for the Division Artillery varied from 4000 to 6000 rounds per night for four nights. PW's taken after completion of the program, stated they had not had anything to eat for several days.

7. Tanks and tank destroyers for indirect fire: We used attached tanks and tank destroyers mainly for interdiction and harassing. They are excellent for the roving-gun type of harassing. Only limited use was made of them for preparation fires because of their extremely flat trajectory at the shorter ranges."

b. Intelligence, Counterbattery: All reports by battalion S-2's and Division Artillery S-2 were verbal, written reports having been discarded early in the campaign. G-2 periodicals which had a daily distribution down to batteries made other written reports a duplication of effort. Special reports to G-2 included a summary of enemy artillery activity four times daily and a weather report once a day transmitted by telephone.

The duties of Division Artillery S-2 eventually evolved to that of Division CBO, almost all other duties being subordinated. The most important single item of information passing through his hands proved to be enemy shelling reports. As front-line troops had never been indoctrinated with the basic principles of reporting information about enemy shelling considerable difficulty was experienced initially with getting any of this type of information. A program was started to remedy this defect during the first rest period and the results were noticeable at once. Subsequently, during each rest period, the problem has been attacked from a different angle with good results each time due to the close cooperation of infantry S-2's. It was made Division SOP that all enemy shelling be reported direct to Division Artillery S-2 through artillery channels.

Major ARTHUR J. PETERSON, 34th Division Artillery.

"(1) Shellreps: Probably one of the most uncomfortable sensations you will ever experience is that of being spotted in the open by Jerry artillery. You feel as though there is nothing you can do about it but sweat it out. Your first reaction will be to hug the ground and pray that nothing comes your way. That mistake is frequently fatal. The first thing to do is to get the hell away from there you are before the Kraut is registered on you. He is generally a methodical Joe and will continue to register on the same place even after there is nothing there. The next thing to do is holler for help. Unless you have the Jerry gun spotted cold there is only one guy in the Army who can help you silence that so-and-so who seems to carry a personal grudge against you. That man is the counter-battery officer.

From the beginning of any operation the C.B.O. keeps track of all the antics of enemy artillery by means of PW interrogation, partisan reports, air-photos and shelling reports. He generally

has a pretty good idea where Jerry has his artillery or where he has his alternate positions. You are the only man who can tell him when Jerry is active. In order to pin down the offending battery the following information is of vital importance:

(a) What direction is he firing from? This will indicate the general area. (This information is of no value unless the CBO knows where you are). If you can see the flash you can report a fairly accurate direction to the enemy gun or your trained ear will enable you to estimate the direction if a flash cannot be seen. If you get a chance to examine the shell crater the furrow may indicate the direction of fire especially if the shell has gone through some foliage before landing. 'Duds' will sometimes give you pretty accurate direction of fire.

(b) What time did the rounds come in? The CBO needs this dope so he can tie your report into others he gets. Two or more reports on the same shelling may locate the enemy guns accurately enough to begin firing unobserved fire right away. This is very important in the case of SP guns because of their ability to change position so often that the CBO can't keep them located.

(c) Where are the rounds landing? The answer to this keeps the CBO posted on what the enemy is trying to do. Fire falling on our front-line troops often precedes a counterattack and information about it will enable our unit CO's to alert the artillery to be prepared to fire in that sector. Fire falling on roads and trails indicate that the enemy probably thinks our front-line troops are being too well supplied with 'C' rations. If the Jerries' attention is directed to our artillery you can bet that some Kraut dog-face has called up his artillery and asked them what in hell are you going to do about those SOB's who are cutting us to pieces. The answer probably was, 'How in hell do youse guys expect us to fire if you don't turn in any shell-reps?'

(d) How many rounds have come in? We want to know this so we can maintain our 2 for 1 ratio and also to find out just how serious he is about the whole thing. Actually, we toss back about five times the number of rounds he throws in.

(e) How many guns are firing and what kind of guns are they? You can tell how many guns are firing by listening to the guns report or the rounds striking. If they are right together or if the time between bursts is very short he is using more than one gun because you can't fire an artillery piece like an M-1 even though it sometimes seems that way. Everyone knows that the round that lands close sounds like the 'Anzio Express' but don't let that fool you. Experience has taught you to distinguish between light, medium, or heavy artillery. The size of the crater or shell fragments sent in will enable the CBO to determine accurately the size and type of weapon that is shooting at you. If the shell comes lobbing in slowly the chances are that it comes from a howitzer. Fast traveling shells come from a gun. The kind that zip over your head before you hear the report of the gun can come from an ~~88 or a tank~~. Report these as high velocity. The purpose of this is to enable the CBO to tie the firing in with the particular one of our friends (?), so that he can be properly remembered with a bouquet of shells.

Report any other useful information such as the flash-bang time, whether he is using airburst, superquick, or delay fuze and anything he is doing that is unusual. These are the things to remember about shell reports. Your location, direction of fire, time of firing, the place shells are landing, number of rounds, number and type of guns. Be patient - a single shell-rep can't turn off the enemy firing like a faucet but it will let us know you are being shelled. Our flying OP's, forward observers and the CBO will be put to work with minimum delay."

(2) Counterbattery - Infantry-artillery teamwork in the execution of counter-battery operations was developed to the highest degree while the Division was playing an active defensive role in the ANZIO Beachhead. There, enemy artillery was plentiful and room for dispersion extremely limited. In addition to a Corps counter-battery section a full-scale counter-battery section was set up in Division Artillery CP utilizing personnel from the survey section to maintain 24-hour operations. This was supplemented by the establishment of regimental counter-mortar sections. This accounted in part for the lightest casualty rate in the division history for a like period of active engagement. A departure from normal counter-battery procedure proved to be very effective. To provide maximum speed in reacting to enemy fire the following policy was adopted: When Shellreps indicated that the enemy guns were active and the information reported was not sufficient to pin down the offending battery, the direct support artillery fired several concentrations on known enemy front-line installations adjacent to the friendly area being shelled. This proved to be effective counter-battery because it usually silenced the enemy artillery. PW reports indicated that considerable pressure was brought to bear on enemy artillery units by their front-line units to refrain from firing unless necessary."

Following are the instructions issued for establishing regimental counter-mortar sections:

Operational Instructions #14, Headquarters 34th Inf Div, 3 May 1944.

"1. The enemy has made effective use of his mortars on forward installations, relieving his artillery for other missions. This may be due:

a. To a desire to conserve artillery ammunition to counter a major attack.

b. To utilize the relative mobility of mortars as compared to artillery.

c. To the relative effiency of our counter-battery organization as compared to our counter-mortar organization.

2. Each infantry regiment will establish a counter-mortar section to utilize the methods developed by the field artillery. One officer will be detailed as regimental counter-mortar officer (CMO).

a. A counter-mortar chart (Scale 1/12500 or larger) will be set up at regimental headquarters.

b. Location of enemy mortars from all sources (Mortar reports, OP's, patrols, etc.) will be plotted accurately on the counter-mortar chart.

c. A form for Hostile Mortar Reports similar to the present Shell-rep form will be adopted.

d. A program for indoctrinating all front-line troops with the principles, purpose, and importance of counter-mortar information will be started.

e. A plan for additional communications to facilitate flow of information will be devised, if found desirable.

f. Personnel of the CT artillery Bns will assist in the establishment of counter-mortar sections.

3. The following discussion of counter-mortar measures, prepared by the Division Counter-Battery Officer, is published for the information and guidance of infantry commanders:

a. The counter-mortar chart should be a scale of 1/12500 or larger as a smaller may lead to inaccuracies in plotting.

b. Weapons under regimental control or direct support artillery generally are sufficient for all counter-mortar missions. Counter-mortar programs wherein a number of active mortar positions of known location are engaged can be arranged through direct contact with Division Artillery Headquarters.

c. When coordinates of a known or suspected mortar position have been determined it should be numbered for easy reference. A variation of the system for numbering enemy batteries may be used, e.g., MAC 9733. The letters identify the position and the numerals indicate the grid square. The letter M, indicating mortars, should be added to prevent confusion with the enemy battery positions. In addition an active mortar list should be prepared periodically and distributed to interested parties. This list should show the number of the enemy mortar, the accurate coordinates, the height in meters (elevation above sea level), source of information, and the number and type of mortars, if known. This will permit missions to be assigned by number rather than by repeating all information.

d. A counter-mortar officer and a qualified draftsman should be on duty at all times at the counter-mortar control center.

e. OP's must be equipped with some device to permit accurate measurement of flash, sound, or smoke azimuth to enemy mortars. A circle of degrees or mils inscribed on a smooth surface and equipped with a movable arrow to indicate direction and oriented by means of direction to a known point measured on the map is more accurate than a compass. The accuracy of location of enemy installations varies directly as the accuracy of location of OP's. OP's should be located by survey. They may be located by inspection if sufficient map detail is present.

f. OP locations are plotted on the chart. When a sound azimuth is received a short line about an inch in length is drawn at that azimuth from the OP reporting. An arrow is drawn to indicate the direction of the enemy mortar and the number of the report

entered above the line: A long ray is drawn for flash or smoke reports and the time of report is entered in addition to the report number. Two or more rays are needed to locate an enemy mortar position but a single ray often will indicate an active known location. Generally, a counter-mortar mission will not be initiated on the basis of a single sound report. A number of sound reports may indicate the area that is active. If enemy mortaring becomes serious, a general counter-mortar program may be started.

g. There is a tendency for observers to report only the mortar fire falling upon them. Personnel must be trained to report all mortar fire observed. As the observer gains confidence in the possibilities of counter-mortar fire the flow of information will become more regular.

h. The direction of fire of an enemy mortar can be determined from an examination of the crater. This will be of some assistance in locating mortar positions.

i. Patrols, PW's, and civilians furnish much valuable information regarding mortar positions. Air photos and mosaics are the best medium for extracting accurate locations received from these sources.

j. Because of the tendency of mortars to move frequently they rarely are in the same position reported by photo interpretations. Reports from PI, however, are valuable for determining likely areas.

k. The Air OP can spot only an active mortar and the appearance of aircraft often causes the mortar to cease firing. As enemy mortar concentrations are generally of short duration it is not practicable to fly special mortar missions. Air OP's are at present under Division Artillery Headquarters control and many times it is possible to contact planes in the air to observe by calling Division Artillery Headquarters.

l. As enemy mortar crews are known to live away from their mortars it is important to engage them while they are active. Speed is essential to counter-mortar action. The CMO must have efficient communications and direct call on weapons best suited to deal with enemy mortars."

(3) A 'No Fire Line' was habitually established on the division front. This permitted battalions other than the direct support battalions to fire targets of opportunity beyond that line without obtaining a clearance from infantry commanders. The importance of maintaining rigid control over all artillery, cannon companies, TD's and tanks in respect to getting clearance to fire within the 'No Fire Line' is best illustrated by the following incident:

Extract, Journal, S-3, 34th Division Artillery

"The 3rd Battalion, 135th Infantry was in position near LANUVIO, Italy, on 25 May and began to receive friendly artillery fire. A hurried call to Division Artillery stopped the fire of division artillery battalions but failed to stop the fire falling on the 3rd

Battalion. Cannon companies were checked but had not been firing. Corps artillery and the two neighboring divisions were called but pleaded not guilty. The friendly fire continued. Later in the day after Air OP's had scouted friendly territory thoroughly, an AA battery was discovered firing and it was thought that the mystery had been solved. The shelled area remained peaceful until the following day when fire commenced again. Frantic calls from the battalion CO shut off all artillery in the corps sector twice but the fire continued to fall. Finally, in desperation, patrols were sent out to the area from which the fire was emanating to see if it were possible that an enemy battery had been by-passed in the movement forward. Patrols discovered the assault gun platoon of a friendly (?) tank battalion that had been firing independently for two days with almost complete lack of knowledge of the friendly situation. Proper action was taken."

(4) Artillery observation was furnished primarily by forward observers and Air OP's. Battery OP's were rare. Flash OP's were set up on the ANZIO Beachhead by all units including the Division MP platoon and 34th Reconnaissance Troop. Information from these OP's was valuable in spotting active batteries but intersections generally were not accurate enough to pin down new locations. Air OP's flew patrol missions constantly and proved their value by silencing enemy artillery by the very fact of their presence. Continual coverage of the division front during daylight hours by Air OP is now SOP. Complete, accurate reports from observers are still a problem. It is doubtful that a satisfactory solution will ever be found due to rapid turnover of forward observers, but improvement can be gained by intensive application of basic principles during training.

c. The Employment of Artillery by the Infantry is of primary importance. When a target is spotted often it is on the move, the artillery observer party cannot see or is otherwise occupied, and the battalion commander cannot take time to instruct an infantry officer or enlisted man on methods of adjustment. Every infantry officer must be able to adjust, every line NCO should be able to adjust and for best operation every man should have some knowledge of the subject.

Colonel CARLEY L. MARSHALL, Commanding Officer 133rd Inf in CASSINO.

"Ive got a couple of privates sniping with the 8" howitzers at the enemy-held houses about 75 yards down the street."

Captain NELSON F. KIBLER, Commanding Company "G", 135th Infantry.

"It is known that there have been numerous instances when, if only the artillery had been called to give supporting fire, much damage and destruction could have been inflicted upon the enemy.

One special instance was in North Africa when one of my officers called back to me by radio that there were several trucks unloading infantrymen to his left flank at a distance of several thousand yards. I told him that if he would adjust artillery fire

that I would call for it and relay his sensing. His answer was that he didn't know how to adjust fire. By the time I reached his position, it was too late to call for the fire.

On another occasion, I was able to withdraw two platoons which had been pinned down by enemy mahcine gun and mortar fire by calling for artillery fire. The division is at the present time scheduling periods for officers and non-commissioned officers in adjustment of artillery fire and I believe is meeting with the utmost success."

Major ARTHUR J. PETERSON, S-2, 34th Division Artillery.

"It is unnecessary to tell an experienced foot-slogging dogface how important artillery support is to him when he needs it. When he runs up against a Jerry strongpoint that is too tough to crack with infantry weapons the proper thing to do is yell for artillery. He's got to be sure, however, that the target he sees is worth tossing a lot of cannonballs at because cannonballs are the only reserve the artillery has and they cost sweat and blood. A single Heinie sunning himself or an Eyetie mule and cart is not worth an artillery concentration. There will most likely be an artillery forward observer somewhere in your company area who is in contact with the guns. Look him up, give him your mission and he will fire it for you if it is humanly possible. Remember, he is just as interested in killing Krauts as you are. Get acquainted with your artillery FO and his detail. Keep yourself posted as to his location at all times so you can find him when you need him. He will fire for the lowliest dogface as quickly as for the regimental CO or almost. If something has happened to him or you can't find him and you can get to your battalion CP by radio or telephone the artillery liaison officer there can get fire on your target for you.

Back in medieval days when the artillery man was a civilian mechanic with an eye for war loot they tried to keep outsiders out of their union by covering up their activities with a lot of semi-scientific mumbo-jumbo just like some professions still do. Artillery since that day has become still more complicated and there are some technical problems that need special training to handle. This need not bother you because all you want to do is lay a lot of scrap-iron on the pretzel-benders and you can do it.

The first thing to do is get a few rounds out in front of you where you can see them. The easiest way to do that is by giving the artillery a point on the way at which to shoot. (This is where the map reading you learned in basic-training would come in handy). The artillery will come closer to hitting that point than you think; so if the rounds suddenly appear about two miles to the right don't cuss out those SOB's who can't read a map - better take another look at your own map. If the rounds land close but still not where you want them try to put yourself where you think the gun position is and sense the rounds accordingly - over or short, right or left. If you are using the battalion in direct support of your outfit it will normally be right behind you somewhere but if your target is an enemy gun or something that re-

quires medium or heavy caliber artillery the chances are that you won't know where they are firing from. If that is the case or if for any reason you are not sure of the gun location, the safest thing to do is call for a range change. This will do two things for you - first, by remembering where the previous rounds fell you will have an idea of the direction of fire, and secondly, you will have a unit of measure out there by remembering how much of an increase in range you asked for. When you tell the gunners that you are within 50 yards of the target, the fire direction will most likely order fire for effect. Unless you are uncomfortably close to your target it is going to be hard for you to judge how close your adjusting rounds are landing. It is very important that you bracket the target; get rounds that are over and short of the target. You will know then that the correct range is somewhere between your over and short rounds."

d. The inclusion of artillery defensive fires in all infantry attack plans is axiomatic. In Italy, the German practice of small scale counterattacks against the 34th Infantry Division has almost proved abortive. Every objective is carefully chosen to invite counterattack over terrain favorable for complete artillery coverage.

Colonel WILLIAM H. SCHILDROTH, Commanding Officer, 133rd Infantry.

"I call it the murder space."

Major ROBERT E. McGRAW, 135th Infantry.

"When operating in terrain that is flat and wooded to any extent, the observation, and therefore the effectiveness of artillery support of the FO and liaison officer becomes very limited. To make up for this lack of observation, prominent points along the axis of advance can be registered by the Air OP in advance. These points can then be used as successive base points as the advance progresses, and will give adequate artillery support and a means of rapid adjustment in terrain giving limited observation.

This same method can be applied to the objective, enabling unit commanders to lay down final defensive fires immediately on occupation of a position."

1. The effectiveness of this team has been demonstrated time and time again.

First Lieutenant JAMES H. FUREY, 133rd Infantry.

"On 8 June at 1930B in the TARQUINIA area our company learned the value of combined infantry and tank operations.

Our immediate objective was to capture a hill which was approximately 500 yards to our front. Between the hill and the point from which we pushed off the terrain was flat and was covered by wheat fields.

We attacked late in the afternoon without any support fire except our own company light machine guns. The attack was made astride a railroad which split our sector. The second platoon was on the left side of the tracks, the first platoon on the right. We advanced 100 yards over the flat terrain towards our objective. At this point our scouts were pinned down by enemy machine gun fire. The first platoon was fired on from three directions by machine gun fire, the second platoon likewise was fired on by crossed machine gun fire. The company was unable to advance.

The company commander requested tank support. At 1830B three tanks arrived. The platoon leader of the first platoon was able to point out the enemy strong points to the tank commander before the attack was resumed.

At 1930B the attack was resumed with the tanks on line with the platoons. The tankmen fired their turret guns at every enemy strong point shifting their fire from one target to another as they advanced.

The rifle platoons advancing with the tanks in a skirmish formation held their fire until within effective range of the targets; then they opened fire, each platoon using its full fire power.

The tanks were successful in neutralizing the enemy fire. The rifle platoons gained fire superiority so that the enemy could not return the fire and overran the positions in a minimum of time.

This objective could have been taken even sooner had the tanks been with us in the first attempt to take the hill. The tank support also minimized the casualties. There were none in the first platoon and two in the second. The third platoon which was committed on right of the first in the second attack had one casualty.

This particular operation has given this company confidence in tanks."

a. Combined training is a prerequisite to the success of an infantry-tank operation. It cannot be expected that infantry, knowing armor draws enemy fire, will work successfully with tanks without being familiar with them.

First Lieutenant LESLIE K. VENSEL, 135th Infantry.

"At ANZIO there was an enemy strong point at house 'Y'. Several attempts had been made to take prisoners from this house by infantry action alone without success. The CO decided to use tanks and my platoon being chosen to operate with them, I was designated force commander. We were to use a platoon of medium tanks (5 tanks) from the 751st Tank Battalion, 2 of them to act as base of fire, the other 3 carrying four infantrymen on each. Also besides the 12 men riding tanks it was decided to send an additional 12 men up a ditch to the left of house 'Y' with the mission of cutting off any enemy attempt to escape from the strong point and also of blocking any enemy attempt to reinforce the strong point during the raid.

No one in the company prior to this time had had any experience with tanks so we were given a 3-day period to rehearse the operation from beginning to end. During this period the men practiced mounting and dismounting tanks at various speeds, and taking position on the back of the tank - the most efficient position found was prone. To dismount men did a push up and vaulted off in such a manner as to present a minimum silhouette. Chin straps of helmets were clasped under the chin for it was found they always fell off in vaulting unless so tied. We picked out an area that corresponded very much with the situation on the line and practiced attacking a simulated house 'Y'. The detailed plan was for one tank carrying me, a German speaking sergeant, and two other men to lead the attack and hit the house frontally. The other two attacking tanks were to move in column until they had arrived to within 50 yards of the house, the 2nd tank to right of house and 3rd to left of house. Men on the 1st tank were to clear the front of the house and the house proper, the men on the 2nd tank were to clear all area to right and rear of the house, and the men on the last tank were to clear to left and rear of the house. Also a squad was to be used as a base of fire to the left of the house in a ditch to cover our attack, the escape of the enemy and our withdrawal. They had with them a 536 radio and a sound power phone with which they had direct contact with the battalion OP. They were also to fire a red flare which would be a signal to the tanks to withdraw after the patrol had returned on foot with the prisoners and taken cover. The tanks were to remain and cover the infantry's withdrawal until the flare was fired. During this training it was found that M1's and tommy-guns were the most suitable weapons to use. A bayonet on the M1 made it difficult to obtain a good position on the back of the tank with a traversing turret. Weapons were held toward the center of the tank to minimize loss in transit. A tarpaulin from a 2½-ton truck was thrown over the back of the tank to make it easier to stay on. Without the tarpaulin, water and grease made the metal surface too difficult to hold to. On the 3rd and final day of training the complete dress rehearsal with all the trimmings was made. It was witnessed by regimental and battalion commanders who claimed that at that time (morning's first light) the infantry could not be seen on back of tanks provided they remained motionless.

The morning of the attack the squad that was to act as base of fire moved up under cover of darkness, took up their position to left of the house, and established communication with the battalion OP. At 0540B, the tanks warmed up their motors. At the same time there was a 10-minute artillery preparation to soften the enemy position and cover the noise of our tanks. Smoke was also fired to mask enemy observation. At 0550B, the tanks moved out through friendly wire that had been previously cut by the A & P platoon and over a route that had been swept for mines to within 200 yards of the house. The instant that house 'Y' came into view the tanks opened up with 75's and LMG's and continued firing through the whole operation. Upon raising my head, just enough to take a look around, I could see a perfect semi-circle of smoke laid by our artillery and mortars that hid house 'Y' from view of main enemy line. The 1st tank moved across an anti-personnel mine field detonating several of same and cleared a path through a heavy barbed wire entanglement that had been expected in the front of the house. Within about 50 yards of the house the lead tank hit an AT mine which caused it to throw a track and tore out the transmission, but no personnel were injured. The possibility of this accident occurring had been expected and plans had been made accordingly. The crew of the tank continued firing with 75's and 30's while we jumped off the tank and started looking for the enemy. The 2nd and 3rd tanks came up as planned even though the 2nd tank had become temporarily stuck in a shell hole and a man fell off. This man, however, recovered his position on the tank. From the time we got within 100 yards of the house there was a continual enemy concentration of mortar fire. The tank killed one enemy who tried to escape, one of our men killed another with a hand grenade and six were taken prisoner. They appeared to be completely demoralized, undoubtedly because of the noise and fire power of tanks. When we were certain that all enemy were cleared we gave the signal for the patrol to withdraw with the prisoners. When they reached the ditch 300 yards from the house the squad acting as base of fire gave the signal for the tanks to withdraw. The crew of the tank which was disabled by the mine got in the other tanks and Lt. LINGLE, the tank platoon commander, destroyed the disabled tank with thermite grenades and then withdrew. When the patrol got in the cover of the ditch the squad acting as base of fire was withdrawn. During the entire operation this squad kept up constant communication with battalion giving them a word by word description of the assault. The entire operation from the time we left and the tanks moved through our front line until the red signal for tanks to withdraw was given took 11 minutes. Speed, we feel sure, was one of the main factors in making this a successful raid and which could only have been obtained through careful rehearsal. In undertaking this operation the first thing we thought of was that the tanks would draw a lot of fire and that we, riding on the backs, would have no chance. While that feeling was never completely overcome, increasing confidence in each other came as our association grew."

b. It must be definitely understood whether a contemplated action is to be undertaken with infantry supported by tanks or with tanks supported by infantry. In general, terrain will dictate the answer. However, in certain instances the strength of enemy positions will be the criterion - an outstanding example of which is quoted below:

Extract, Journal, AC of S, G-3, 34th Infantry Division.

"Initially the 756th Tank Battalion was ordered to support the 168th Infantry's attack to cross the RAPIDO River at dawn on 27 January. Little was gained and at dawn 29 January the 2nd Battalion, 168th Infantry was committed to support an attack by the 756th Tank Battalion. Engineers finally prepared a suitable crossing at 1600B to allow the mass of tanks to roll across the river, through the minefields to the foot of the hills where the infantry passed through, the tanks remaining in support positions."

Lieutenant Colonel JOHN L. POWERS, 168th Infantry.

"The morning of January 25th, the Battalion CO and Battalion S-3 reported to regimental headquarters and received orders to move the battalion to the vicinity of MC 893237. The battalion closed in the new area at 260500 January. At 1500 hours the Battalion CO received the regimental attack orders as follows: 3rd Battalion to attack on the right, 1st Battalion on the left with 2nd Battalion in reserve. LD - RAPIDO River. Time - 270700 January 1944. Objective - Hill 213. The 2nd Battalion was to occupy present 3rd Battalion assembly area vicinity MC 890235, when that area was vacated.

At 270600 January the Battalion moved and closed in new assembly area vicinity MC 890235 at 0700 hours. Battalion CO reported to regimental forward CP at 0630 hours, where he was informed that the battalion was to be prepared to move to new area vicinity MC 874235. The attack jumped off on time at 0700 hours and both 1st and 3rd Battalions ran into heavy small arms fire and intense mortar and artillery fire. Both battalions also encountered elaborate AP mine fields. Casualties were heavy, and the attack was stopped about 200 yards west of the RAPIDO River.

Patrols were sent out with the mission of reconnoitering approaches to the RAPIDO River, and also the crossing sites used by the 1st and 3rd Battalions. Additional patrols contacted companies and command posts of the assault Battalions to determine their locations, and also locations of known mine areas. At 1730 hours, the Battalion moved by infiltration to an assembly area vicinity MC 874235, closing in at 2030 hours.

Orders were received that the 2nd Battalion would attack with tanks 290730 January. Order of attack of the battalion to be a column of companies, E, F, G. Company "H" was to deliver overhead machine gun, and also give supporting mortar fire from positions at MC 872238. Patrols were sent to Companies "A" and "B" to determine their locations.

At 290530 January, the forward CP moved to MC 865240. At 0645 hours Company "E" left its assembly area and crossed the LD at 0730 hours. At 0925 hours, Company "E" had two platoons across the river which were pinned down by heavy machine gun fire from the vicinity of the cemetery (MC 855242). One light and three medium tanks had been able to get across the river, but at the time were unable to assist in the movement of Company "E". Mortar fire on the cemetery was called for by the CO of Company "E". By 1130 hours, Company "E" had three platoons across the river.

At 1730 hours, the tanks began their crossing in mass and following closely behind the assaulting elements, Company "E" started moving toward Hill 213. It was necessary to follow in the tanks' tracks since the entire area being passed through was heavily mined. The troops received very little enemy machine gun fire, since for the enemy to fire would mean disclosing his position to the tanks. By 1840 hours, Company "E" was at the base of Hill 213, closely followed by Companies "F" and "G". At 1930 hours, Company "E" was reported on the objective, and at 2300 hours two companies were consolidating their positions.

In the early morning hours of the 30th, counterattacks were beaten off. These attacks were principally from Germans trapped and encircled by the rapidly advancing troops. Many prisoners were taken and much equipment and ammunition captured. Patrols were sent out to make contact with units on our left and right. The patrol that went to Hill 56 to contact the 1st Battalion went to the top and found wire entanglements and vacated enemy positions. At 1345 hours, the 3rd Battalion was reported to have occupied the town of CAIRA, and 1st Battalion was consolidating on Hill 56 to protect the left flank of the regiment.

The above is strictly a factual account of orders received, action taken, and results achieved.

For a more complete picture of the action reported above considerable elaboration of the facts stated in the report is required. I shall elaborate upon them, based on my observation of the action as the battalion commander of the infantry battalion concerned.

First of all, a description of the enemy defensive position is essential. The first obstacle to overcome was the RAPIDO River, a swift flowing stream, which was fordable by infantry at most points, but which was definitely an anti-tank obstacle. West of the RAPIDO River anti-personnel mine fields paralleled the river to a depth of three hundred yards. From the RAPIDO River to the base of Hill 213 lay an absolutely flat plain from which all vegetation had been removed in order to provide a perfect field of fire for the numerous machine guns emplaced in portable steel pillboxes and elaborately prepared bunkers at the base of the hill. There were a few buildings on this plain. Most of them contained SP guns, anti-tank guns, or machine guns. About one hundred yards from the base of the hill there was a continuous band of high barbed wire approximately fifteen yards in depth. Just behind the pillboxes a barrier constructed of brush and trees apparently cleared from the hill itself formed a dead abatis. Just below the military crest of the hill a band

of double apron wire protected a line of individual foxholes which had overhead cover. Each foxhole had a small sign sunk in the ground beside it. Some of the numbers I recall were G-23, G-24 and G-25. On the crest of the hill was another band of double apron wire. On the west slope of the hill were numerous dugouts, apparently used for sleeping quarters for the garrison.

The first lesson I learned from the operation was the necessity of adequate engineer support for tanks in an action of this kind. Attempts were made by the tanks to get across the river by their own means. At one point over one thousand 75mm HE shells were fired point blank by various tanks in an attempt to break down the far bank sufficiently to form a ramp. This was unsuccessful. The final crossing was at last prepared by improving an old ford with rocks dumped in the stream. This work was done by the 235th Engineers under heavy artillery and small arms fire.

As I see it, there were three main functions performed by the tanks of the 756th Tank Battalion. The first was to provide a passageway through the anti-personnel mine fields by driving through them and exploding the AP mines. The infantry could follow the tank tracks without setting off more mines. The Germans had apparently placed considerable confidence in the RAPIDO as an anti-tank obstacle and while some anti-tank mines were encountered and some tanks disabled, many of the tanks which succeeded in reaching the river, crossing it under artillery fire, and escape bogging down in the marshy ground, also succeeded in reaching the base of Hill 213. The second main function of the tanks was to get the infantry through the high barbed wire. The third and probably most important was to scare 'hell' out of the Jerry machine gunners to such an extent they fired little for fear of catching a 75mm shell at point blank range. The infantry in turn aided the tanks by giving them protection against SP guns and AT guns. Once an SP was definitely located and foot troops closed in it did not stay in that locality.

As a result of the combined infantry-tank action, Company "E" was starting up the hill just as it became dark. Company "E" was closely followed by Company "F". Company "I" followed Company "F" with a command group of fourteen officers and men. By that time Jerry was well zeroed on the crossing and was placing considerable artillery fire on the flat ground at the base of the hill. Of the fourteen in the command group, five of us reached the hill. Company "G", the reserve company, followed the command group. By midnight, we had the hill pretty well organized although there were still quite a few Germans still in their bunkers and holes within the position. About an hour before daylight the Jerries started coming out of their holes, throwing hand grenades, and doing some firing, and for the next two or three hours we were pretty busy rounding them up. Shortly after daylight the tanks knocked out one or two SP guns which were in buildings on the plain behind us. While those things were going on Jerry added to the general festivities by dropping plenty of artillery fire on the plain behind us - apparently directed at the numerous disabled tanks spread out

on it. The live tanks were huddled up at the base of the hill where he couldn't quite get at them. However, he did drop considerable mortar fire on the crest and east slope of the hill.

Communications to the rear were quite difficult. Between friendly tanks and enemy artillery, wire just didn't stay in. The 511 radios did not function after their "dunking" in the RAPIDO. The two artillery radios were lying someplace out on the plain together with their operators or the bodies of the operators. For several hours the only means of communicating to the rear was the 81 mortar platoon leader's SCR 195 to his guns. Messages were relayed from the mortar position by sound power phone to Company "H" CP and from there by telephone to battalion rear CP or regiment. A good part of the time the wire from battalion rear to regiment was out. When that was so, the SCR 510 was used to communicate with regiment.

That afternoon, light tanks crossed the river carrying gas and ammunition for the mediums. Jerry still had the crossing covered with an AT gun some place down to the south of Hill 213. Two light tanks went up in flames in about thirty seconds. Thanks to the SCR 195 we had the crossing smoked by our 81 mortars in about three minutes.

The importance of communication between the supporting tank unit cannot be over stressed. In this particular action, a liaison officer equipped with a SCR 510 reported to me from the tank battalion. When I moved out between the assault and reserve companies I left him at the battalion rear CP with my S-3 for two reasons - one, to hold down the size of the command group and to make sure that he and his radio had a fair chance of continuing to remain operational. Secondly, I had already provided myself with my SCR 511, the mortar SCR 195, two artillery SCR 610's and two wire teams laying 130 wire followed up by 110 wire. In this way I felt I had a chance of maintaining some kind of communication with the rear. Direct command liaison between myself and the tank battalion commander was also employed for he parked his command tank about fifty yards from my CP on the base of Hill 213. Direct contact between platoon and company commanders and individual tank and tank unit commanders was also employed."

c. In team operation the tank destroyer should have as its primary mission - support of the tanks. Because of the assigned primary mission it is equally fallacious for the tank destroyers to assume they cannot act in other roles as it is for the infantry commander to disregard the primary mission entirely. If in an operation one element of the team is absent or is forced to withdraw, the brunt of enemy pressure must be taken up by the other elements regardless of primary role. In the LANUVIO action the 191st Tank Battalion and 894th Tank Destroyer Battalion were attached to the Division. The 191st Tank Battalion having lost most of its officers and experienced tank crews in a previous action was unable to function rendering the 894th Tank Destroyer Battalion and the 34th Cavalry Reconnaissance Troop the only available forces in a situation demanding heavy armor.

Extracts, Journal, AC of S, G-3, 34th Infantry Division.

"On the evening of 27 May orders were issued to the 34th Cavalry Reconnaissance Troop to cover the Division's left flank and to develop enemy resistance in a gap which appeared during the day 27 May between the left flank and the 45th Infantry Division. While not able to advance during the day 28 May over terrain absolutely devoid of cover the Troop did carry out its security mission, exposed, and in the face of very heavy enemy self-propelled, anti-tank and artillery fire.

With all infantry elements of the Division very heavily engaged and unable to make any gain against the stubborn defense of the enemy it became readily apparent that armored support was vitally necessary. In the absence of sufficient heavy armor the Troop was ordered to support the attack of the 3rd Battalion, 133rd Infantry early 29 May. Well aware of its vulnerability, it moved ahead of the infantry and succeeded in destroying four to six enemy machine guns and inflicted an estimated fifty casualties in killed and captured. It, further, led the infantry battalion to its objective and was, thus, directly responsible for the only substantial advance made in two days.

On 30 May the Troop was assembled on the left flank as security and also as a reserve for counterattack purposes.

The afternoon of 31 May saw the Troop again ordered to lead the 3rd Battalion, 133rd Infantry in an assault in the same general area as on 29 May. Proceeding in the face of observed direct fire of five heavy enemy self-propelled guns the Troop enabled the infantry to move forward and improve its positions and to hold the ground gained. Notwithstanding almost four days of continuous action, the 34th Cavalry Reconnaissance Troop was directly responsible for the only material gain made across the Division front 30 and 31 May."

"The LANUVIO action holds particular interest in that in the absence of tanks, and in a situation demanding heavy armor, the 894th Tank Destroyer Battalion was employed in a tank role. The success with which the 894th Tank Destroyer Battalion played its part aided materially in the capture of the Division objective.

Continually disposed in the front lines as close support of the infantry, the battalion undertook many small unit operations completely foreign to its normal role. In the initial assault on VILLA CROCETTA, May 29, one platoon of Company "C" criss-crossed an enemy zig-zag trench system firing its machine guns down the trench and killing an estimated 80 enemy for the loss of one M-10 tank destroyer with crew. Elements of Company "A" on June 1 moved forward of the front lines on the left flank of the Division and there placed direct fire on enemy guns, observation posts and other installations. On June 3, Company "B", disposed along a line with approximately 40 yards between M-10 tank destroyers, carried the advance elements of the 133rd Infantry on the destroyers to the

regimental objective. The Reconnaissance Company was employed during the entire action on the right flank in the gap between the 34th Infantry Division and the 36th Infantry Division, and by constant patrolling, often dismounted, prevented infiltration of enemy groups active in that vicinity."

"Early July 4 the 804th TD Battalion was disposed to block all roads leading south into the Solvay Factory area while the Reconnaissance Company, 776th TD Battalion blocked to the north and northeast on the right flank. Both battalions, operating first one then the other, with the 34th Cavalry Reconnaissance Troop in support, covered a front of some 3 kilometers. The road nets, particularly in the 804th TD Battalion sector were effectively blocked by extensive demolitions which necessitated operation on foot to accomplish the mission of protecting the flanks of the division.

CHAPTER IV - ENGINEER OPERATIONS

In Italy, a country criss-crossed with streams, mountains, dry washes and marshland, the solution to the problem of moving a division more than ever depends on the engineer's ability and his resources. Over such difficult terrain two distinct missions of divisional engineers must be recognized - (1) Close support entailing reconnaissance, mine clearing and demolitions in the assault and (2) Maintenance and development of communications entailing road repair and bridging. In the attack bad weather at times has forced division engineers to the latter mission entirely leaving the former to be carried by the already overly-burdened infantry.

Major CARL J. SCHIEFERSTEIN, Executive Officer, 109th Engineer Battalion.

"Bridging.

a. It has become increasingly apparent that bridging operations by divisional engineers should be kept to a minimum. When bridging operations are necessary the divisional engineers should prepare approaches and exits but the actual bridge construction should be done by special bridging units, thus releasing the divisional engineers for supporting the advance of the division.

b. Divisional engineers should choose by-pass sights so that the by-pass will not hinder future bridging operations of higher echelon engineers.

c. It has been found that heavy portable culverts constructed in a rear area and then hauled to the crossing site and then laid in place by the use of the M-2 tank retriever is a very satisfactory method of making a crossing under direct enemy observation. The type culverts used were 4 feet 6 inches wide, 6 feet high and 14 feet long consisting of four bents of 8 inch timbers anf floored with 3 inch planks. It is possible to lay these culverts side by side to obtain any desired length crossing. This type of crossing was used at CASSINO.

Roads.

a. Traffic circulation is very important and it has been found that in Italy where there are many one-way roads that two one-way roads with proper traffic control is just as good as a two-way road.

b. The old maxim of 'drain off the water and throw on the rock' has been reaffirmed but it has been found that the entire road surface must be rocked and not just the ruts and pit holes. Also, by-passes should be rocked.

c. Roads should be marked clearly by the use of signs such as mine cleared signs, directional signs and town signs.

Communications.

a. It has been found that the 284 radio is not too satisfactory for engineer operations as the range is not great enough. Also they are not too dependable and it has always been the policy

of this battalion to utilize both radio and field messages in sending a message.

Miscellaneous.

a. In a static situation whereby mine fields are used in a defensive position it is necessary that infantry security parties be obtained for engineer working parties. On the ANZIO Beachhead it was found that it was necessary to obtain both security and carrying parties from the infantry as the amount of work was so great that engineer personnel alone could not have accomplished the work in the allotted time.

b. The bull-dozer is a valuable piece of equipment and great care must be exercised in the use and maintenance of it. Spare parts should be made available by higher headquarters so that in case of damage to the bull-dozer it can be readily repaired. Each company should have a least three good bull-dozer operators so that the bull-dozer can be worked constantly.

c. By-passes should never be constructed without culverts. It is much more difficult to put a culvert in a by-pass that has been washed out than it is to put one in originally."

a. While no startlingly new methods of engineer procedure were evolved during the campaign many difficult problems presented themselves. The solution to the following enabled the 34th Infantry Division to employ armor with a mimimum exposure to AT fire in CASSINO without which the position gained in the town could not have been held.

Lieutenant Colonel ROBERT E. COFFEY, Commanding, 109th Engineer Battalion.

"During the month of February we were confronted with the problem of making a level crossing for tanks in the town of CASSINO. The normal demolition method could not be used because tanks using the by-pass would be subjected to close range anti-tank fire.

The Problem: To construct a Class '30' bridge across a drainage ditch 15 feet wide and 6 feet deep. The bridge site was under observation and subject to all types of fire i.e., small arms, mortar and artillery. The original crossing was a concrete slab supported by five reinforced concrete stringers. About six feet of the original slab was usable, in spite of the enemy demolition which had cut all except six feet of the slab on the near bank.

The Solution: To construct the bridge in sections in a rear area and move the sections to the site by truck and tank wrecker. Bridge section plans and construction were completed during daylight hours and the sections were emplaced under cover of darkness. The actual bridging operation was completed in two hours after the sections were delivered to the assembly area one-half mile from the site. Cover for operating personnel was provided by old slab bridge and the only casualty was one soldier who suffered a slight flesh wound. The wooden structure was placed alongside

the slab bridge making a total usable width of 19 feet. Flooring was placed on the bottom of the section to insure adequate bearing."

b. Infantry A & P Platoons. In Italy the A & P Platoons have had to undertake engineer operations to maintain the regiment in the advance. From observations made it is believed that a soldier can be thoroughly trained as an infantryman or as an engineer but not as both.

1st Lieutenant IRVIN A. BEYL, 135th Infantry.
2nd Lieutenant WAYNE E. SHUMAN, 135th Infantry.
Staff Sergeant KENNETH F. McARDLE, 135th Infantry.
Sergeant JAMES H. LEET, 135th Infantry.
Technician Fifth Grade ALBERT J. FRANCHI, 135th Infantry.

"With the A & P section it is the same old story - attempting to do too much with too little. With regards to this one of our greatest difficulties arises when the situation calls for man-power specially trained. To be more specific: After crossing the VOLTURNO River the third time, our battalion had trouble with a mine field, one of the largest we have ever contacted. Naturally, the cry went up, 'Where the hell's the A & P section?'

At that time we were terribly handicapped. Out of 19 men only three were sufficiently trained to tackle the job. Some of the men had been trained previously but they had long been left behind. We cleared that field; took our training right there, too! We were fortunate that time. Other sections having the same trouble were not so fortunate, time and lives were lost. The point is this: Replacements unskilled, untrained for such technical and dangerous work, should not be assigned to such work."

1st Lieutenant JEROME L. FLUSTER, 133rd Infantry.

"One of the things that I have learned in actual combat is that the minesweeper is relatively ineffective crossing fields at night. The only safe and positive way is to probe and feel with the bare arm and hand. To do this requires little technical skill, but it does require some practice and a great deal of patience. Line companies should have special members of each rifle platoon taught to do this.

It is extremely costly to use paths through mine fields if there is any other possible route to reach your objective. It is impossible to deploy in case of a fire fight or an artillery or mortar barrage. Anyone caught in a minefield during a fire fight or a barrage is stuck there, exposed and helpless, until the firing is lifted."

Sergeant CLARENCE L. RUSSELL, 133rd Infantry.

"Some of my experiences in actual combat are that men or patrols or anyone who finds mines and mine fields should give a more detailed

report of their findings. My men and I have at times gone on details to clear mines and mine fields that have never been there. This happens because someone has seen tin cans or bottles and have not taken time to investigate before sending their report.

Another thing is that I don't think we get adequate protection for our work under enemy action. At times we have had to be our own protection, armed only with carbines and trying to use a mine detector at the same time. I think we should have at least one BAR and 2 riflemen. This would give protection for our mine squad in front of our troops."

CHAPTER V - SIGNAL OPERATIONS

1. This subject will be subdivided into three sections. These are message center, radio, and wire communications and are further subdivided to bring out specific lessons learned by the various divisional components.

a. Message Center. Signal company operations were patterned quite closely after principles set forth in Basic Field Manual FM 24-5, 'Signal Communication'. No particular problems were encountered and the successful operations can best be explained by enumerating the specific things that became SOP as operations proceeded.

First Lieutenant JOHN A. DUNSCOMBE, 34th Signal Company.

"All new replacements were trained first as foot messengers and motor messengers even though they were to later become code or counter clerks. This has resulted in the technicians and non-coms knowing more of the basic messenger routine."

Warrant Officer (JG) HAROLD P. KNUTSEN, 34th Signal Company.

"Constant changing of relief drivers on motor messenger runs resulted in all drivers knowing unit locations for next scheduled or special runs. Our messengers have always watched closely for any troop movements and are instructed to stop and make inquiries of headquarters along their routes. This information is reported to the message center chief upon return. This method has kept our message center better posted on locations than was possible if they depended upon Staff sections or lower units to report."

Lieutenant Colonel STANLEY L. BURGHARDT, Headquarters 34th Infantry Division.

"During periods of combat, priority and urgent messages were delivered immediately upon receipt. Routine traffic was delivered every hour on the hour. When not in combat priority and urgent traffic was delivered immediately upon receipt but routine traffic was delivered every hour on the hour from 0600 to 2000 hours. Originally we kept all message center records for a period of seven days. This has now been increased to thirty days as several messages, particularly of an administrative nature, had to be traced after the seven day period.

The encoding of all messages is checked for correctness. Urgent messages are passed to transmitting agency and then checked. Priority and routine messages are checked even before transmission starts. This causes a slight delay in the individual message but has saved much time on the total of encoded traffic. All cryptographic errors that come to our attention are called to the attention of the one making the mistake as soon as possible.

No other communication agency makes the usage of Signal Operations Instructions that message center does. The Division message center keeps current S.O.I.'s of all units with which concerned. The message center officer checks constantly to see that the current and only the current items are in use. All superseded items and expired codes and other cryptographic equipment are promptly destroyed and reports rendered."

Captain LLOYD W. REISER, 34th Infantry Division Artillery.

"Division Artillery reports no departure from normal procedures in the operation of their message center and messenger personnel. Due to the inadequate personnel being allotted on the T/O for sustained operations, all units have trained radio operators as code clerks. This has helped considerably.

Captain WILLIAM D. PASKE, 133rd Infantry.

"All infantry regiments have placed much importance on the training of good foot messengers, particularly on the battalion and company level. These runners have been given training in compass reading and on reporting what they see. All infantry units have used and placed much confidence in their runners."

First Lieutenant EDGAR T. ADLER, 135th Infantry.

"Our regiment has attached a 1/4 ton C & R and two motor messengers from each battalion to the regiment. These messengers carry the traffic to their respective units."

Lieutenant Colonel STANLEY L. BURGHARDT, Headquarters 34th Infantry Division.

"The AFCODE supplied by higher headquarters for use within the Division is distributed to company and battery level of all assigned units. The signal officer reproduces a code similar to digraph for all attached tank, tank destroyer or other supporting troops. This is allowed to be distributed down to whatever level the individual unit desires. Compromise of this code will in no way affect the Division AFCODE. The Division command net uses a reproduced code not held by any other unit. Likewise a similar code is prepared for the exclusive use of the reconnaissance troop. Slight alterations are made in the vocabularies of all these codes to include words more applicable to the operations."

First Lieutenant ROBERT J. CORRE, 34th Signal Company.

"In rapid moving situations much use is made of AFCODE. When the front is stable and movement slow such as at CASSINO and ANZIO, we place very little trust in the security value of AFCODE and resort almost entirely to the M-209."

b. Radio Communication. The signal company operated in four nets. These were the Corps net, Division command net 'A' which comprised the infantry regiments and division artillery, Division command net 'B' which covered attached units and liaison net. The liaison net was comprised of stations at each infantry regiment, flanking divisions and the Commanding General. All nets functioned well from an operation standpoint. However, the fact that wire communication was virtually always 'in' resulted in very little traffic being passed by radio. The Division liaison net was very active at all times and passed a large quantity of traffic of informative value.

Lieutenant Colonel STANLEY L. BURGHARDT, Headquarters 34th Infantry Division.

"Quite frequently, notable on the ANZIO Beachhead, an SCR-193 radio can be used satisfactorily in the Corps command net. A single SCR-399 is sufficient for the signal company. The radio link to Corps proved valuable, especially during very rapid operations when Corps could not keep wire communications in. In one day the Division Command Post moved from a point slightly north of ROME into CIVITAVECCHIA, a distance of forty-one miles. On this day communications to Corps were maintained by a Division wire line plus Corps radio. Our forward command group were in the habit of making long moves without the Corps radio link. When these moves became so long that wire contact was lost it became necessary that the Corps radio accompany them also.

The Division command net 'A' and liaison net resulted in a duplication of sets and personnel at all infantry regiments. The traffic load of both nets could well be handled by a single net. These nets have now been combined, personnel increased in number and ability, duplication eliminated.

All radio operators have been given concentrated training in the use of Cipher Device M-209 and AFCODE. The combined net will handle all Cryptographic and message center duties to include delivering traffic directly to Staff sections. This will eliminate the inevitable 'message center' delay. All traffic will be filed with the unit message center at the end of each twenty-four hour period. The teams will be composed of four operators each at out stations. At the Division NCS it is composed of additional message center and cryptographic personnel.

Originally SCR-193 radios mounted in 3/4 ton vehicles were attached to the infantry regiments. When the forward command post is initially established generally nothing larger than a 1/4 ton vehicle is taken forward. As a result when wire did fail and radio communication was needed, only the rear command post could be reached. The regimental sets have been installed in 1/4 ton vehicles and now travel directly with the S-2/S-3 sections, giving us the desired emergency communication when wire fails.

Staff officers continue to be quite unaware of the capabilities and limitations of radio communication and equally ignorant regarding security. Virtually all security breaches are made by officers and in many cases over the advice of radio operators. It is believed that two procedures would correct the above failings.

First all officers should receive more training of the subject before coming into action. This should be live and practical training and not theory or a lecture. Secondly by Command Action they should be made to use the radio during training periods and at regular intervals so that when the emergency arose they would be prepared. This should be followed up closely by disciplinary action for security breaches."

First Lieutenant ROBERT J. CORRE, 34th Signal Company.

"Division command net 'B' is not normally operated except when wire fails or the rear echelon is out of range of field wire. A notable use of this net was from the ANZIO Beachhead to the NAPLES area. Two SCR-193's were used with 'flat top' antennas. An average of ten messages were handled over this net per day, for a period in excess of two months. The only other method of communication was a 'water messenger' requiring three days to make the round trip. The net was continued during the breakout from the Beachhead and actually functioned well between ROME and NAPLES, a distance far in excess of the sets normal ratings."

Captain LLOYD W. REISER, 34th Division Artillery.

"Division Artillery report the necessity for keeping radio sets SCR-284 somewhat removed from gun positions as concussion breaks certain tubes used in this set.

A radio relay system has been developed and operators given training in relaying on the FM voice sets. In mountainous terrain much relaying has had to be done.

When a forward observer is unable to carry his SCR-609/610 due to terrain or other limiting difficulties, he uses an SCR-536 to contact his base set. From there it is relayed to the fire direction center."

Captain WILLIAM D. RASKE, 133rd Infantry

"The infantry is making maximum use of the SCR-300's. All attached tank, tank destroyer, chemical battalion or other supporting troops must be equipped with their own SCR-300's for infantry support. The infantry T/E does not allow sets being supplied by them."

First Lieutenant EDGAR T. ADLER, 135th Infantry.

"The SCR-300's have worked excellently between tanks and infantry. The SCR-509 furnished by the tank battalions to the infantry is too heavy and have not worked out well. One regiment operated an SCR-300 net composed of infantry, tanks and a Cub plane for observation. Results were good.

In my regiment three of the SCR-536's in the heavy weapons company are each on a different frequency (that of a rifle company).

Thus when a machine gun platoon is attached to support any one company, it draws the SCR-536 to work with that company. This insures much closer support. The other three SCR-536's of the heavy weapons company are used by the mortar sections."

Sergeant MICHAEL S. KLEMPN, 133rd Infantry.

"A 536 to the heavy machine gun platoon is very good because there will be communication with the advancing assault platoon or by CO to tell the machine gun platoon officer, when to give support fire or cease fire as the situation may call for. This company used this system in the attack from CECINA to the ARNO River, and found that we had better control over our attached weapons. Consequently, we were able to get them into action from 5 minutes to 30 minutes sooner than any time previously."

Captain WALTER W. BROOKS, 168th Infantry.

"The common SCR-300 channel for all anti-tank companies has worked without difficulty. However, each regiment should have five channels. Quite frequently all three battalions are committed, the common company must have a separate one and all regiments are using the SCR-300 for an additional command net link."

Lieutenant Colonel STANLEY L. BURGHARDT, Headquarters 34th Infantry Division.

"The infantry regiments much prefer the use of the SCR-300 to the SCR-284 for the regimental command net. It has given excellent range and its light weight makes it much easier to transport, especially in mountainous terrain. Where distance or intervening terrain makes the SCR-300 inoperative, the SCR-284 has been used and results have been satisfactory. The 284 is used consistently between regiment and service company.

Many instances were brought up indicating enemy shelling due to direction finding equipment used on our radio transmitters. In every single case investigated it was found that the cause was not D.F. Common causes were:

(a) Visual sight of the operator, antenna or troop concentration.

(b) Location near a worthwhile target as a gun position or prominent crossroad.

(c) Transmission in the clear of friendly locations or movements."

Technical Sergeant EDWARD LA POINTE, 135th Infantry.

"Wire and radio men are hampered greatly when carrying the authorized M-1 rifle. It is recommended that carbines and pistols be issued as substitutes. Also the use of a mussette bag instead of the full field pack would aid the communications men who usually have more equipment to carry than the riflemen."

c. Wire Communication. The signal company wire personnel followed basic principles for wire communication. However, it was learned that widely varying practices had to be adopted depending upon the terrain, rate of movement, number of units being served and the road network. This resulted in the necessity for the development of a very flexible and aggressive organization. The need for very close cooperation between wire construction men and switchboard operators was recognized at an early date. The Italian campaign to date has offered us four quite distinct types of wire problems. These will be handled by phases and the problems will be described and then the method used to solve each will be explained. In all cases good wire communication resulted, although our methods were quite different in each.

Lieutenant Colonel STANLEY L. BURGHARDT, Headquarters 34th Infantry Division.

"From the point where the Division was first committed south of BENEVENTO, through three crossings of the VOLTURNO River and on up to COLLI there were few good roads. Usually not more than one good road was found in the entire Division area. Often this was supplemented by trails and engineer-built roads. Because of mountainous terrain and all ground except roads being a mire of mud (from heavy rainfalls) wire laying became very roadbound. Mines were encountered in great quantity and were usually cleared only from the MSR. It is estimated that 90% of the wire construction was confined to the roadside.

When the situation was slow moving all lines were overheaded whenever possible. This minimized trouble from vehicular traffic, road repair work, short circuits or line losses due to heavy rains. When time permitted the original installation was overheaded as laid but when time did not allow this practice it was overheaded at the first opportunity.

Only wire W-110B was used by the construction platoon. This type wire properly constructed and used with repeaters EE-89 gave sufficient range for every problem that was encountered. On many occasions lines from twenty to twenty six miles long were made to talk satisfactorily. The use of Spiral four or long range field wire, especially in heavily shelled areas is considered not practical because of the difficulty of splicing as compared to W-110B.

The 1/4 ton vehicle was used to lay virtually all the wire during this phase. It was the only vehicle that could operate on the highly congested and narrow roads without causing traffic tie-ups, confusion and accidents. Many narrow roads were made one way except for 1/4 ton wire and messenger vehicles.

Throughout this entire phase it was possible to maintain two lines to each of the infantry regiments and to Division Artillery. As the Division Command Post moved forward the two trunks best located and that had given the least trouble were used to connect a rear switch to handle service elements.

The second phase and one which presented different problems was that from CEPPAGNA through SAN PIETRO, SAN VITTORE, CERVARO and into CAIRA and CASSINO. In this sector a good road was available only

part way. Mule trails were converted into peep trails by the engineers but no vehicle larger than a peep could travel these trails. One regiment went right over a high and rugged mountain range. The only trail here was a second rate mule pack one. During part of this period the Division had an additional regiment attached to it. The usual mine fields were encountered. At the beginning of this phase another Division was relieved and an attempt was made to take over the existing wire system.

The lines taken over from the unit relieved gave much trouble. This was due in part to their having been on the ground during wet weather for well over a month. Also an excessive number of lines had been installed along this route and cabled together. Trouble shooting was very slow and difficult. New lines were installed to our major subordinate units, dressed well away from the original installations. Fortunately this was during a slow moving operation and we were able to dress up and rehabilitate some of the original system for use of service elements and attached units.

The 1/4 ton vehicle continued to be the only practical one for wire laying. Much wire was laid cross country by hand and gave good service after being installed. Trouble shooting on foot was slow but the absence of vehicular traffic served to keep wire failures low.

Approaching CASSINO the infantry positions were separated from supply echelons and the Division Command Post by a three-mile valley with the RAPIDO River running through it. There were frequent artillery concentrations at certain points in the valley. These critical spots were soon learned and the wire re-routed away from them resulted in eliminating much trouble. The re-routing was done on foot using reel RL-27.

Communication by wire across the valley was extremely difficult. Five W-110B lines were laid from the Division Command Post near CERVARO to an advance Division switching central located in CAIRA, one and one-half miles north of CASSINO. Each line followed the same general route but was separated five to twenty yards from the nearest one of the five. Test points were installed in three places along these trunks with a wire chief, trouble peeps and wire personnel at each of the three places. Each test point maintained wire both ways from that point and additional trouble personnel worked from the Division Command Post and the advance switch. After the five lines were installed communication to our advance switch was lost only once during a period of nearly thirty days. This was for a period of less than two hours. One test point was located halfway between the Command Post and the advance switch. At this location repeaters EE-89 were installed and monitored for correct adjustment. This enabled the Division Staff to talk to the advance Regimental Command Posts of the 142nd, 135th and 160th Infantries, all three of which were tied into the CAIRA board. Wire distances of these units averaged twenty miles. After a period of a week the four most suitable lines were continued and the remaining one abandoned. Throughout the entire period three lines were kept in most of the time.

The use of the test points, wire chiefs, and trouble teams made the difference between failure and success on this operation. Much trouble shooting was done on foot from these points as even the movement of a 1/4 ton vehicle would draw fire. Wire W-130 was sometimes used at night to replace badly damaged sections in a hurry. It was replaced at the first opportunity by W-110. In this instance alternate routes were not necessary. The avoidance of specific target areas, vehicular traffic and a small amount of spacing between lines worked very well. Thus the same trouble teams and points could be used on all lines.

The regimental teams were operating over very rugged terrain but by increasing them to eight men each and pushing the advance switch up to CAIRA they were able to keep wire in at all times."

First Lieutenant JOHN BONFORTE, 34th Signal Company.

"The advance of one regiment for a period of about ten days and over a distance of fifteen miles was followed by a mule equipped wire team. At places the trail was difficult even for the mules. It was learned in this instance that these wire lines had to be laid well off the trails to avoid trouble from the mules hoofs and shelling. On mountain trails it was found best to construct lines on the high side of the trail as most any accident or trouble that developed affected the lower side. Frequently a mule would slip from the trail or supplies would be dropped. Naturally the fall would break the wire if it had been installed below."

Lieutenant Colonel STANLEY L. BURGHARDT, Headquarters 34th Infantry Division.

"At the ANZIO Beachhead we were favored with a good road network and dry weather. Also the hazards from mine fields were minimized after the positions had been occupied for a short period. The Division took over intact the wire system of the unit relieved. It was found to be excessive for our needs and nearly half of the less reliable lines were abandoned. The areas of heavy shelling such as road junctions and gun positions soon became apparent to wire personnel and lines were either re-routed or buried. Many of the forward lines could not be maintained during daylight due to enemy observation and fire.

Underground or buried lines were used for the first time and worked very well. After a short period grounds developed which prohibited their being simplexed for telegraph but they worked very well for telephone. Test points were installed every quarter mile and TM-184 Terminal Strips used. This greatly facilitated trouble shooting.

Burial was accomplished by use of a cable plow borrowed from the Corps signal battalion. It proved a very arduous and time consuming task but paid dividends considering the time that was spent in the positions. All lines that couldn't be re-routed away from specific targets were buried. Only important tactical lines were buried.

An advance switch was installed about three miles ahead of Division Command Post. During one phase traffic to the two regiments in the line was extremely heavy and three lines were installed to each.

On the Beachhead eighty percent of wire failure was caused by shellfire, bombs and falling flak. In one instance all locals at Division Command Post were lost by an AP bomb landing within a few yards of the switchboard dugout. The locals had been buried to within a few feet of the switchboard, but were above ground just as they entered the dugout. The AP bomb scattered sufficiently to get this one small vulnerable spot. Where burial is needed henceforth it will be complete.

During the breakout from ANZIO Beachhead, followed by the pursuit through ROME to LEGHORN and PISA, we were favored with a good road network and a well defined axis except in one brief instance. Artillery shelling was nil but vehicular traffic plus tank and tank destroyer movement created a hazard to our lines. The chief obstacles were the speed of movement required, mine fields and snipers. During the latter stages wire supply stocks became very low and much recovery had to be effected even during operations.

Line construction must be especially good when operating with tanks. Every conceivable crossing must be well overheaded or buried. Burial at crossings should exceed eight inches to protect the wire from tanks. All wire must be dressed well off the shoulders and preferable up on ledges and banks.

Wiremen in their desire to construct good lines often enter mine fields. Good wiremen can't be replaced easily and it is best to keep them away from such practices. The wire can be laid along the mine warning signs for greater safety, especially in trouble shooting.

From the Beachhead to ROME the pace was so rapid that we had to discard our SOP of two lines to each regiment and reduce it to one each. Also additional use was made of a forward switching central to tie in attached units. Division wire personnel laid wire as closely behind the advance combat elements as they could. After leaving LAUVIO and up to ROME practically no wire was laid within the infantry regiments and Division Artillery.

As the Division left ROME and headed north a fourth regiment was added. Due to the rate of move and the number of subordinate units it was decided that if wire was to be maintained at all it would have to be on a reduced scale and by the use of an advance switching central. Wire teams were with each regiment. The signal company installed two W-110B circuits up Highway #1 twenty miles north of ROME. The signal company teams with the four regiments were instructed to travel with the Regimental Command Post and each time they set down this team would tee-splice the Division circuits on highway and extend it into the regimental board. By close liaison and instructions two regiments were kept on each of the two lines. At any spot that a regiment stopped for even an hour they had wire communication to Division. As Division moved up they would merely cut a switchboard into the trunks and have

communication both ways. At this time it became impossible for Corps to keep their circuits up to us so we displaced forward using our own W-110 lines back to our rear Command Post and from there on into Corps on their circuit.

At a point about twenty miles north of Rome the wire shortage developed and the pace of advance increased. It was decided to lay only one circuit forward along Highway #1. At this time two regiments were advancing in column ahead of the Division Command Post and the other two were located near Division. The two leading regiments were tee-spliced onto the single trunk and the two nearby regiments were laid to by a Division wire team. At 0600 hours one morning we were told that the Command Post would move fifteen miles that morning. By having aggressively pushed our wirehead forward along with the TD and tank units we had twenty-six miles of W-110 laid ahead of us. As it developed the Command Post that day moved forty-one miles and right into CIVITAVECCHIA. Communication was maintained during this entire day between Corps, Division Command Post, four infantry regiments and the advance Division Command Post. Prior to moving into CIVITAVECCHIA the advance Division Command Post was twenty-six miles from the main Command Post. An EE-89 repeater was installed on this circuit and it talked well. The Deputy Corps Commander talked over this twenty-six mile Division circuit back to our main Command Post then through Corps circuits to the Corps Commander and reported the Division's capture of CIVITAVECCHIA. After that the advance group moved into town completing a forty-one mile move for the day, actually the time involved was from 0700 hours in the morning until about 1500 hours in the afternoon - eight hours. While the town was being cleared the Division wire team completed the last fifteen miles and when the Commanding General arrived an EE-8 telephone was waiting for him and communication was still in to all four regiments.

In constructing this circuit each regimental team had a 1/4 ton and 3/4 ton vehicle. These were used to make the tie-ins. The actual forty-one mile circuit was laid by four 1/4 ton peeps from the signal company group. The highway was divided into twelve mile sections and each peep assigned three miles. The Division wire officer and his assistant coordinated the joining of the circuits and the tying-in of the regiments. A wire dump of twenty-five to fifty miles was kept as near to the wirehead as possible. The lines were well dressed as laid and very little trouble developed. Trouble shooters were stationed at test points along the line as well as at both ends. This enabled them to reach any trouble in a minimum of time. The Division wire officer kept his reconnaissance as far forward as possible so that he would be personally informed of movement, by-passes or anything that might alter the wire plan.

From CECINA through LEGHORN and up to PISA the Division had five infantry regiments, two tank and two tank destroyer battalions. One trunk was installed and maintained to each of these units in addition to artillery and service unit communications. During this period wire supply became critical and recovery was required.

During July the signal company recovered 897 miles of W-110. The artillery recovered an additional 300 miles."

First Lieutenant JOHN BONFORTE, 34th Signal Company.

"In taking over lines from other units they should be redressed, properly tagged, bad sections or W-130 replaced, rerouted away from target of traffic areas.

Wire construction along roads has proved highly satisfactory by comparison to an attempt to lay it cross country. It is installed and maintained much more rapidly."

Captain WILLIAM P. PASKE, 133rd Infantry.

"Issue of maps to key wire non-coms and keeping them oriented on the situation helped very much. All wire personnel report Command Post changes or locations as rapidly as learned. Reconnaissance must always be made well ahead of wire laying."

First Lieutenant JOHN BONFORTE, 34th Signal Company.

"By using the same personnel to maintain a line that has originally installed it, the initial work was better inasmuch as the men knew it would directly affect the amount of work that would follow. Using the same men for a considerable length of time to maintain a group of circuits resulted in their becoming very familiar with every weakness and likely trouble point. Thus they could easily locate trouble that did develop and they made improvements each time a case of trouble appeared. After a few days the circuit would become trouble free."

Captain LLOYD W. REISER, 34th Division Artillery.

"Artillery units used very little W-130 except for forward observers. Close cooperation between Division Artillery and signal company helped reduce the number of circuits and kept all units better tied-in. Where a test point is installed by one unit all lines running past that point up to the capacity of terminal strips should be cut in. Artillery made wide use of simplex talking circuits for FDC and thus eliminated much wire laying."

Captain WALTER W. BROOKS, 168th Infantry.

"Infantry regiments preferred to use W-110 as much as possible and laid W-130 only as a last resort. When they moved up on W-130 lines they replaced them with W-110 as soon as possible.

It is not at all practical for infantry units to recover wire. The personnel required to install and maintain their wire system is far greater than the number allotted on present T/O's."

First Lieutenant RALPH H. HARADEN, 34th Signal Company.

"The use of switching centrals often saves communication from a complete failure. Most Staff officers do not understand the necessity for or reason behind the use of these switches. These officers become quite disgusted when two or three boards are in the circuit. However, there are times when all subordinate units can be tied into a forward board and if only a single line remains in to the advance switch all units can be contacted. It saves greatly on wire construction and facilitates trouble shooting, testing and maintenance to a high degree. It further allows certain elements to be kept in the wire system that couldn't possibly be kept in otherwise."

Technician Sergeant RALPH J. OLSON, 34th Signal Company.

"Repeaters EE-89 were often loaned to artillery for use on long circuits. Repeaters were kept in readiness at all major switchboards and were plugged into the circuit to boost calls from distant points."

First Lieutenant RALPH H. HARADEN, 34th Signal Company.

"Monitoring of circuits revealed a tremendous level of unnecessary calls and idle chatter. It is recommended that an officer monitor periodically and control conversations of this type by his action or the action of his commander."

Technician Fifth Grade ASHER GERECHT, 133rd Infantry.

"We found in the mountain action before CASSINO, in the RAPIDO River crossings, in the LANUVIO action, and at MT. MAGGIORE that the present battalion switchboard, BD 71 is unsuitable for battalion fighting movement. It is most cumbersome, and easily damaged. It cannot be used to any good advantage in the mountains. We have found the German switchboard to be exceptionally well-suited for action, it being far simpler and lighter, one-fifth as heavy, than ours."

First Sergeant CHARLES V. BEEKMAN, 133rd Infantry.

"From experience in carrying the SCR-300 radio I have found that the harness which supports the set while carrying on the back allows the sharp under edge of the case to dig into the back of the operator. In order to keep the set from shifting and throwing the operator off balance the carrying straps must be made very tight. My company has remedied these faults by mounting the set on a packboard and securing it by ropes. The weight of the set is carried on the shoulders as before but the canvas on the inside of the board distributes the load to the back and the balance of the operator is more easily maintained. This is especially important in mountainous terrain."

First Lieutenant JACK W. PARRISH, 133rd Infantry.

"While we were operating in the mountains north of SAN LUCE we had to supply the troops by pack-mule train. The men returning to their companies, as well as runners and litter bearers, usually followed the telephone wire and pulled the wire into the trail. The mule trains following cut the wire to ribbons. The best method we found to remedy this was to put the wire as high as possible and string marker tape in places where a person could get off the trail."

Staff Sergeant LEWIS E. McKENZIE, 135th Infantry.
Staff Sergeant JAMES R. GAVESKE, 135th Infantry.

"On the first crossing of the VOLTURNO River we came up after dark to the regimental CP and found there was no way to cross the river by truck, but rations, water and ammunition had to get across. First we tried a peep to carry a cable over, but the peep went down stream.

The next thing we tried was a 2½ ton 6x6 cargo truck by its winch. It worked OK so we loaded a peep and supplies on and then dragged it across. We kept that up until we had four peeps across to haul the supplies out to the companies which were about a mile away. We moved all of the rations and ammunition that night by the same process. We also took all of the casualties back across."

a. Rations. Every effort should be made to augment the 'C' or 'K' ration which must of necessity be fed to the front line soldier. The 'C' or 'K' type ration is an emergency ration and is not designed to feed troops over long periods of time. During January and February 1944 the 3rd Battalion, 135th Infantry established an improvised field bakery in the kitchen bivouac area and made doughnuts, fruit turnovers, cakes and cookies, and in addition made sandwiches of jellies and jams and fresh meat when it was obtainable, and made spreads for sandwiches from canned meat. These were packed into ration boxes, ammunition boxes and sent up to the troops by pack mule. This aided greatly in reducing the monotony of the ration, added the necessary calories in the diet which was deficient in the 'C' or 'K' ration. This food being more palatable the troops ate more of it and their morale and physical condition was much better than that of troops which were fed a steady diet of emergency rations.

Staff Sergeant JOHN DIAVASTES, 133rd Infantry.

"While troops are on the line, kitchens should be able to draw materials to make pastry such as doughnuts, cookies, cake, etc., to go with the men's 'K' or 'C' rations, whatever it may be. It builds up their morale and tells them that their kitchen crew is thinking of them and not sitting on their beds."

Technician Fourth Grade ALEX G. BLACK, 133rd Infantry.

"A better ration should be given the fighting men when they are able to get a hot meal instead of the usual hash or stew menus. Pork and gravey or beef and gravey takes no more time to prepare and is much better."

Staff Sergeant DELBERT F. LEET, 133rd Infantry.

"When bringing rations up to the company always be sure not to bring fire down upon the area, or vicinity of the company, by pulling in too fast with the vehicles. Always pick a secluded spot where the enemy cannot observe your movement."

Lieutenant Colonel IVAN G. WALZ, Headquarters 34th Infantry Division.

"Reserve rations - At present the division is using the following plan which is satisfactory.

1. Each kitchen carries one day's reserve of hard ration, either 'C', 'K' or in some units 10-1, and the Division quartermaster maintains a reserve of one day boxes ration for the entire division.

a. The reserve 'C' or 'K' ration carried in the infantry kitchens eliminated confusion in case the unit is ordered into combat after a 'B' ration has been issued to the companies for the next day's consumption or the telegram has gone in for the 'B' ration. In such cases the unit uses its reserve ration and puts the non-perishable portion of the 'B' ration in reserve. When the unit is again out of combat the companies are able to serve a 'B' ration even if the unit has drawn a normal issue of hard ration.

b. The reserve ration is also to be used in emergency if for any reason the unit is unable to draw their daily ration.

c. At times when there is a known possibility of units not being able to draw rations for a day or two days, the reserve is increased in the unit to cover the anticipated period."

Private First Class WILLIAM E. WOODROW, 135th Infantry.

"The infantry soldier when going on an attack, usually carries either 'C' rations or 'K' rations, and sometimes a combination of the two. As for the 'C' units all I can say is experiment on different methods of carrying them. I've found that three units fit nicely in a combat pack. As for the 'K' ration, I suggest you open the boxes and break the contents down. There may be things enclosed you won't eat so why carry them. The wax box will heat a cup of coffee nicely. A 'D' bar is always a good thing to carry in case of an emergency. Carry your rations in the most convenient place. They can cause a lot of grief during a long march if not packed well."

b. Clothing and Equipment.

Lieutenant Colonel IVAN G. WALZ, Headquarters 34th Infantry Division.

"During the Italian campaign the carrying of barracks bags for personnel has proven impractical, especially for combat infantry personnel. The lack of transportation to transport the barracks bag makes it necessary to store them, under guard until such time as the unit is not in combat, and then send transportation back to them. By this time the distance to the place of storage is exceedingly great. This denies the individual the use of any clothing or personal equipment that he may need during combat

which may be for periods of two to three months. In addition to this disadvantage the stored barracks bags contain large amounts of clothing which could be used by higher echelons for replacement or for the operation of clothing exchange units.

This division discontinued the use of barracks bags in all except reconnaissance elements, in October 1943 and has operated without them satisfactorily ever since through the use of army sterilization, bath and clothing exchange units, and a system of clothing exchange operated by the division quartermaster both in conjunction with the division showers and on direct exchange with units. This system relieves a strain on the already overtaxed transportation within the division.

QM sterilization, bath and clothing exchange units have proven a great morale booster and a great help in the supply and maintenance of individual clothing. These units were first used by the 34th Infantry Division at PIEDMONTE D'ALIFE in December 1943 after an extended period of 70 days in combat. At that time the facilities offered by the unit consisted of bath, towel, a complete change of uniform from the skin out, underwear, socks, woolen uniform, field jacket, if needed, shoes and leggins, if needed. The unit accommodated from 1700 to 2000 men a day. If QM sterilization, bath, and clothing exchange units are maintained as close as possible, normally from 8 to 10 miles behind the front lines, it eliminates the necessity of the soldier carrying any extra clothing except perhaps a change of underwear and socks, as when a unit or part of a unit is in a reserve position and has an opportunity to clean up, that unit can be taken to the S & B unit and given a hot shower and clean clothes and is better fit to go back into combat in a shorter time, than would be possible if unit had to re-equip through normal supply channels."

Corporal ROLAND DAWSON, 135th Infantry.

"There is one particular item which is never mentioned back home and is never issued in sufficient quantity.

I am speaking of the small gasoline stove which anybody who spent a winter in the hills of Italy will tell you are a very definite improvement to life which, at best, is absolutely no good."

Lieutenant Colonel JOE L. BOURNE, 168th Infantry.

"Experience in combat to date would indicate that the Intrenching Set, Infantry #1, is excessive to our needs except when the battalion has to prepare a defensive position. Our experience to date has indicated that the transportation allotted for this purpose can be put to a better use and service to the battalion by helping out with the ammunition in addition to carrying the normal equipment needed for the A & P platoon. The set should be carried with regiment or an arrangement worked out whereby battalion could draw a part of this set should circumstances indicate a defensive position."

Staff Sergeant CARL C. RODDY, 135th Infantry.

"Have a regular issue of socks and underwear at least once a week for the troops when they are on the line."

Staff Sergeant RUSSELL E. SAUNDERS, 133rd Infantry.

"Dispose of the blanket roll in the daytime and let the kitchen force bring them up at night. The blanket is too bundlesome and provides a larger target. The roll hinders movement going down narrow trails and through bushes."

Lieutenant Colonel JOE L. BOURNE, 168th Infantry.

"Present T/O arms bazooka men with a rifle. It is believed that a pistol for the bazooka man is much more desirable. We have actually given the bazooka men pistols to carry from time to time. The objection of the rifle is that it is a little too cumbersome to be carried by a man who is also carrying the bazooka, and, especially so when you consider that the bazooka man has a little different ammunition problem from the ordinary rifleman."

Staff Sergeant ROY WENIKE, 133rd Infantry.

"The artificer or supply sergeant should stay with the company CP to list items desired for the next evening's distribution. These items come forward from the kitchen area with the following days rations. Rations and supplies for detached platoons should be sent with the ration team of the company to which they are attached. This has been our standard operating procedure since we first arrived in Italy."

c. Transportation.

Captain JAMES G. JONES, JR., Headquarters 34th Infantry Division.

"Pack mule trains - During the fighting in Italy it has frequently become necessary to supply by pack mule. The 34th Division has had varied experience with mules, using both organic and attached pack mule trains. In November 1943, it first became necessary to use mules but there were none available from higher echelons and we were forced to requisition such animals as could be found from civilians and organize provisional pack trains within the units. This required use of organic personnel which were needed elsewhere and required training of animal handlers, transportation of maintenance equipment, and considerable supervision, the personnel and transportation for which is not available in an infantry division. This system was not at all satisfactory.

In January 1944 three Italian pack mule groups were attached to the division. They were well trained, well officered but at first poorly equipped. (This was later remedied). Due to difference in languages, customs, and temperament, there was consider-

able trouble at first in handling and use of the foreign pack trains. Experience has shown that these Italian or other foreign pack trains can render valuable service if handled properly and in turn can be a lot of trouble if not. The following system is used in the 34th Division.

1. Upon attachment of a pack train, an officer is sent to the train as liaison and if it is a foreign organization an interpreter is sent with him. All dealings between units and pack train commanders are transacted through this liaison officer.

2. These pack mule trains are commanded by competent officers and non-commissioned officers and are organized as any other unit into sub-divisions of squads, sections, etc. and work best when operating under their own commanders. Orders and instructions therefore are given to the commander of the detail and not to individuals. Unsatisfactory results have occurred in almost every instance where units attempted to take command of the mule leaders individually and not go through the commander as would be the case of a normally attached American unit.

3. Any generous act on the part of units using attached foreign pack trains, such as giving surplus candy and cigarettes to the train, pays dividends.

4. The pack train commander should be informed of the tactical situation, just as any other attached unit, to enable him to intelligently plan his operations."

Sergeant ALBERT MACCIOLA, 133rd Infantry.

"In the past we have been marking and breaking trails, hours before the ration train leaves the ration dump. This is a very good idea, and should be used in the future."

Lieutenant Colonel IVAN G. WALZ, Headquarters 34th Infantry Division.

"It has frequently happened that tactical plans are adopted which require motorization of units from organic division transportation beyond the ability of the division to support. In each such instance the following reactions occurred.

1. Ration and water supply were insufficient.
2. Gasoline supply became critical.
3. Drivers were overworked and unduly fatigued, and inefficient when released to normal functions.
4. Vehicle maintenance deteriorated. For any except short definite moves of not to exceed one regiment, vehicles for motorization should be furnished from sources outside the division."

d. Forward Dumps

Lieutenant Colonel IVAN G. WALZ, Headquarters 34th Infantry Division.

"During the campaign due to terrain and traffic difficulties it

became necessary for the division supply services to establish forward dumps. The most frequent of these were Class I and III truckheads established by the quartermaster. When road nets became congested and bridges and fords were uncertain these truckheads were established in areas which, though in advance of safe locations of normal supply installations, relieved congestion on roads and insured the smooth flow of supplies in case of bridges and fords becoming impassible, which did occur.

Experience has proven however the inadvisability of attempting to place division dumps too far forward. An instance is given as example.

1. During the attack on CASSINO in January 1944 a forward quartermaster dump was established at M. VILLA, was intended to be a reserve dump across the RAPIDO River. This dump was within long range mortar and nebelwerfer fire. The enemy covered this dump by fire whenever any activity took place in the vicinity of the dump thus denying its use as a supply point. The officer in charge and three men were killed by enemy fire. The dump was abandoned.

2. It has been found that when reserve dumps must be established for any reason in forward areas it is advisable for unit to build up small forward dumps either by regiment or battalion."

e. Ammunition.

Captain HAROLD W. RODENMAYER, 133rd Infantry.

"From the standpoint of procedure in supplying ammunition to units of an infantry regiment those principles set forth in Par. 24 FM 7-30, service company and medical detachment, are basically sound. However, any procedure in the supply of Class V items must be flexible.

In the early stages of the campaign in Italy the 133rd Infantry combat team had the mission of pursuing and maintaining contact with the enemy in a flanking maneuver.

During this phase, expenditures of ammunition were very light and two 2½ ton 6x6 trucks loaded with the amounts and types of ammunition prescribed were released to battalion control.

During the following phases of the campaign all six of the 2½ ton service company trucks were retained under regimental control. The regimental munitions officer personally supervised the movement and bivouacing of, as well as the loading and loads to be carried. He was assisted by the munitions sergeant, the sergeant truck-master and one private, (the private being an understudy for possible replacement of either sergeant). The warrant officer, munitions and ordnance, and the truck driver with the 3/4 ton weapons carrier usually stayed at the service company kitchen area and handled all ordnance items for repair, replacement or salvage. He was assisted by a technical sergeant, small arms expert, well qualified to make major repairs on all small arms. This technical sergeant was in excess of the table of

organization, but proved exceedingly valuable to the regiment in that weapons needing repair were quickly returned to combat units because evacuation to higher echelons for repair was eliminated by an estimated 90%.

Location of dumps. Upon entering combat, all vehicles carried basic loads. Organizational vehicles (¼ ton truck, ¼ ton trailers and prime movers) accompanied the troops as far forward as possible, reverting to battalion control as soon as weapons and hand-carried ammunition are taken forward by hand.

At this time the battalion motor pool becomes the location of the battalion ammunition dump. Loads of ammunition are consolidated and empty vehicles with trailers are returned to the regimental dump for refill to basic load and return to battalion pool. Thus the battalion is assured a reserve of ammunition which is adequate, mobile and always well forward. This motor pool and ammunition dump is controlled by the battalion transportation officer, assisted by personnel from the A & P platoon of battalion headquarters company.

The regimental ammunition train, or dump (mobile) in this regiment is always located well forward initially, generally near the rear CP where telephone communication is available.

During the battle near ALIFE when the VOLTURNO River formed a natural barrier, the regimental ammunition train was moved across the river as soon as a bridge was in. At this time the forward elements of the regiment were approximately 1500 yards west of ALIFE and the ammunition train moved into a grove of trees about 500 yards east and 700 yards south of ALIFE and near a good road. This assured a reserve of ammunition in event the bridge was knocked out.

Generally speaking the ammunition dump of this regiment is located from two to ten miles behind the troops; moving forward as often as may be required.

In static situations such as the battle of CASSINO, the regimental dump should be established well forward and all 2½ ton trucks unloaded and sent back to the service company area under the control of the transportation sergeant.

During the night prior to the assault on the RAPIDO River, we moved the regimental ammunition train to a point about 600 yards south of SAN MICHELE and unloaded it, making a ground dump. The trucks returned to the service company bivouac area which was in the vicinity of SAN VITTORE. Stocks were built up the following nights and maintained at the following: 150,000 to 200,000 rounds caliber .30 machine gun; 75,000 rounds 8-round clip; 35,000 rounds carbine; 25,000 rounds caliber .45; 1,500 rounds 60mm mortar; 1,500 rounds to 2,000 rounds 81mm mortar light; 600 rounds 81mm mortar smoke; 1,000 rounds hand grenade fragmentation; 500 rounds hand grenade offensive; 150 smoke pots W.P.; 300 rounds hand grenade smoke W.P.; 200 rounds hand grenade yellow; 300 rounds signal air craft, each color; 500 rifle grenade HE AT M-9A2; 300 rounds rocket HE AT MG-A-2. This stockage proved adequate to supply this regiment by battalions establishing forward dumps and to assist other regiments in supplying their units at times when their trains were

depleted or unable to get forward.

Different types of ammunition will be used while in different terrain. In rolling country more mortar will be used while in mountainous terrain most expenditures will be small arms and grenades. Likewise fighting in towns and cities will require more grenades and caliber .45 and 81mm mortar HE heavy than fighting in open country.

This regiment carries the TBA prescribed load with the weapons. On the regimental train, the six, 2½ ton service company 6x6. Following is the load carried:

Type	Number of Rounds
Cal. .30 carbine	33,000
Cal. .30 Ball 8 rd clip	61,824
Cal. .30 Ball 5 rd clip	30,000
Cal. .30 Machine Gun	72,000
Cal. .50 Machine Gun	1,325
Cal. .45	10,000
60 MM HE	972
81 MM HE light	900
81 MM HE heavy	150
81 MM HE smoke	150
Grenade, hand offensive w/fuse	250
Grenade, hand fragmentation	750
Grenade, rifle HE AT	300
Rocket, HE AT M6A2	200

Signal Air Craft, 120 rds each color, red, green and white.

This load has proved adequate at all times and in over 300 days of actual combat the troops of this regiment have never been out of ammunition of any type.

It is recommended that the 2½ ton ammunition vehicles be retained under regimental control at all times. This simplifies the supply of all Class V items by making all six loads centrally located and available for issue to any one or two battalions. Regimental control also makes more trucks available for use in resupplying the regimental dump."

1. Experience has shown that not only must the intelligence and operations officers work in close cooperation, but they must work at the same desk for best results. This applies to division, regimental and battalion staffs.

a. PW Interrogation. Much has been learned in the employment of interrogators and by the interrogation personnel in the performance of their job. In this division it has been recognized that the closest cooperation must exist between the combat elements for whom information is obtained and the interrogators obtaining that information. To be of the must value the interrogator must at all times be well informed as to the tactical situation and have a good knowledge of future plans. He must be able to secure information as speedily as possible and see that it is promptly disseminated. The sooner the PW gets back to the interrogator the faster information can be gotten and disseminated. This is considered so important that lectures on this subject to all troops in this division are included in every training program.

First Lieutenant HANS G. KLAPPER, Headquarters 34th Infantry Division.

"While fighting on Hill 593 northwest of CASSINO, our troops were counterattacked by a company in the early morning. This counterattack was beaten back and only one PW was taken, a first lieutenant, who was leading the attack. It was evident that he was suffering from shock. He was rushed back to the regimental interrogator and was interrogated about 30 minutes after being captured, still under shock. It is important to note that he was given no chance to relax, drink, eat or relieve himself, but was forced to keep on the go until he got to the interrogator. The interrogator, recognizing the condition the prisoner was under, did not waste much time with him, but asked him some direct questions which were answered promptly. The prisoner stated that the company making this counterattack was a new unit in this sector which had been slated to be committed against the ANZIO Beachhead, but suddenly was ordered to come south to the aid of the 44th Division which was receiving a heavy beating. In fact a new battalion was thus identified, the II Battalion, 361st IR of the 90th light division, a motorized unit. We were able to learn from him that another company of his battalion was going to make another counterattack the same evening, should his fail, also that the I Battalion, 361st IR was on its way down. He was finally evacuated to the division cage. By then shock had mostly worn off and he was on his way to regaining the station becoming a proud and stubborn member of the master race. Had this officer been given a chance to recover from his shock prior to being interrogated, it no doubt would have taken much time to extract the information received and we would have been unable to obtain a good portion of it.

Initially, interrogation was performed by a 6-man team at divisional and corps level. However, much valuable time was lost

as PW's had to be evacuated to division before being interrogated. It was also found that in this set-up much detailed information of tactical value to regiment and lower units was not exploited. An interrogator working for one regiment only, can certainly do a more detailed and accurate job on the tactical situation in his regimental sector than a division interrogator who handles PW's from 3 regiments and sometimes even 5 regiments. In our present set-up we have 1 officer with 2 non-commissioned officers interrogating at each regiment and 1 or 2 officers with 2 non-commissioned officers at the division cage. The interrogator at regiment works strictly for his CO and is directly responsible to S-2. The interrogator at division is under G-2 and works on all information of interest at this level. There will be some duplications and overlap, but it had been found that this happens rather seldom, and if it does a double-check never hurts. The information obtained at regiment will immediately be disseminated, first to the battalion who captured the particular PW, then to the other battalions and to division. Usually by the time the PW's get to division the interrogator at division has been informed of the information gotten at regiment which will give him an idea of what else that particular PW can know. This system works out very well as long as S-2's, S-3's, G-2, G-3 and the interrogators at regiment and division work closely together. The division interrogator should make it a habit to be at the division CP at least once a day and preferably more often.

While in the beginning most interrogators worked with maps we now in this division work with all sorts of photos whenever feasible. It is much easier to orient a PW on a photo especially on an oblique. Close cooperation between the air photo interpreter and the PW interrogator has proven of much value. When we do get something urgent we often have a photo interpreter present during interrogation who, armed with the latest sortie flown, which usually is less than a day old, checks the information obtained immediately. Many profitable targets for the artillery and the air corps have been obtained in that manner.

At CASSINO our photo interpreter found an unidentifiable object on the south slope of Monastery Hill. Interrogation of various prisoners from this sector finally identified it as a very well-camouflaged SP gun, which was not firing but being kept ready. The battalion CO, II Bn, 132rd IR who was very security conscious examined one photo among a batch we showed him just a little too long. There was only one house on this oblique which we had suspected as his CP. This of course confirmed our suspicion. When we finally confronted him with all the information we had of his positions and his regiment, he was so surprised that he made some corrections and also gave us his battalion's boundary which we didn't have.

On another occasion a deserter who was unable to orient himself on a map finally discovered a familiar looking tree on air photos and was able from there to lead us to his company's strongpoint, show us a mine field in front of it and the ditch their patrols used to get through this mine field, and various other

installations. We have often been amazed how much of the information gotten from PW's and air photos checked. A comparison of the MLR on the ANZIO Beachhead as gotten from photos with the one obtained from PW's showed hardly any variation.

Another person with whom closest liaison should be maintained is the Order of Battle man at division. Most of his information comes from interrogation of PW's, at the same time he will supply the interrogator with much of the information he needs in order to interrogate. It is the interrogator's job to supply these missing links for the O/B's picture and he can only do that if he knows what is missing. Captured documents, too, are used to great advantage for this purpose. In fact so much information has been obtained from documents that all units are reminded at every opportunity to turn in immediately every piece of paper found. Many German gun positions have been neutralized due to some seemingly obscure piece of paper found on a dead German or in an abandoned CP. Unfortunately, we are still having occasional trouble with souvenir hunters keeping enemy diaries and overlays.

Interrogation technique could only be improved by actual practice and much was learned in this respect, especially after we got a clear picture of what information S-2, and G-2 are after, and just where and how we fit into the picture. We found that it very often works out better if 2 interrogators work on one PW at the same time. The main advantage being that it keeps the PW on the hop, not giving him too much time to think, and also 2 interrogators can think of more than one. On the other hand we found that it often works out very well to interrogate 2 or more men from one company at the same time. At SAN VITTORE one of our patrols brought in 4 PW's and, while their stories checked, every one of them gave us different locations. We finally got all 4 of them together and by letting them argue among themselves obtained the correct information, which was later confirmed. On another occasion 2 PW's from the 7th Company, 211th PGR were brought in together. Since both had Polish names we took them on together. It turned out that one was a Polish Pole, hating the Germans and was forced to fight, while the other considered himself German and was an ardent Nazi. Our fears that the Nazi would spoil our willing PW proved unnecessary as the two wanted to show each other up and tried to out-do each other on the amount and exactness of information they had.

Only trained interrogators should be permitted to interrogate PW's. In one instance a PW, being interrogated at a battalion CP by a German-speaking soldier, said that he heard the Germans were expecting our attack any time. The soldier, knowing German, but not being familiar with military expressions, reported that the Germans were going to attack. Since our troops actually planned an attack (it was then about H-Hour minus 6) it was called off. When the PW reached regiment the interrogator detected the mistake and after higher headquarters were notified, plans for our attack were resumed. Much valuable time and effort could have been saved, had this PW been immediately evacuated, as directed. On another

occasion, a PW's paybook was examined and the PW was reported as belonging to a division which at the time was supposed to be in RUSSIA. This new identification had everybody up to corps and higher headquarters all excited, until the regimental interrogator found out that this man had belonged to this unit, but was now in the 955th IR which had been facing us in that particular sector."

b. Photo Intelligence. The lessons learned in photo intelligence embrace, for the purpose of this report, the trials and errors directly affecting interpretation in a division. It is felt that sufficient work has been done to permit recommendations as to most useful employment of personnel and of aerial photos.

Lieutenant Colonel HUBERT H. DES MARAIS, Headquarters 34th Infantry Division.

"Aerial photos were not extensively used by this division until the Italian campaign, due to a scarcity of trained ground force interpreters. Interpreters were, during the beginning of the campaign, assigned to divisions, and at a later date, by this division, assigned to regiments in an attempt to fulfil the aim of photo intelligence in passing on the maximum amount of military information in the minimum time.

Two officers and two enlisted men are required at division headquarters, whose duties are to ensure at all times that subordinate units have the proper photo coverage at the right time. They provide such interpretation and studies as required by any divisional unit, organic or attached, who have no such personnel. Division artillery headquarters requires the services of an officer of superior ability. His work will be coordinated with division headquarters and with the counter-battery section of corps for confirmation and corrected locations. Close liaison between Air OP and photo officer should be SOP. In this manner many unidentified objects on photos may prove to be targets of value.

In great demand by the artillery are 6-inch vertical photos, blown up to a scale of 1/25,000 with an arbitrary grid. These photos prove very valuable as firing charts.

Each infantry regiment has a man of sufficient ability to do reconnition, general terrain studies, and handle photos for the joining of mosaics. As to whether this man should be an officer or a non-commissioned officer is debatable, but he should be of sufficient rank so that his findings will be respected and used.

G-4 has used terrain studies to very good advantage in determining whether his supply and evacuation will be by truck, mule or man. PW interrogators are obtaining accurate information beyond belief by the use of air photos, and in particular, the use of obliques.

The use of air photos, both vertical and oblique, with our own patrols cannot be overemphasized. They provide both a good medium for the questioning of the patrol upon its return, and for daylight patrols to record their route and observations while on their mission."

Major ARTHUR J. PETERSON, 34th Division Artillery.

A trained air corps photo interpreter was attached to division artillery headquarters during the operations at CASSINO. This innovation worked excellently from its inception and definitely proved the value of having the photo interpreter in physical contact with the people who could react with minimum delay on his interpretations. Areas made suspect by shellreps were referred at once to the photo interpreter and in some cases fire was brought to bear on the enemy battery before it had ceased firing. The interpreter was also of great value to the S-2 in selecting harassing missions, locating mortars, and in making terrain studies for future positions."

c. Partisan Control.

Major HARRY C. KAIL, Headquarters 34th Infantry Division.

"Ever since the entry of the 34th Division into ROME it became apparent that the Partisans were a problem to be dealt with if security and law and order were to be maintained in divisional areas. Very little was known of them at the time. They were an overzealous group, carrying various sorts of arms and without proper handling might be a menace to our security, communications or supply as well as a source of terror to civilians. It became necessary therefore to deal with them as such.

On or about 30 June 1944 the Commanding General, 34th Infantry Division, attached Agent GEORGE MERRIMAN of the 34th Division CIC as liaison with AMG Section, 34th Division, both to work directly with the Partisans through G-2 and G-1 and to deal with them as an individual divisional problem. The method and plan of procedure was laid down at a conference between G-2 and G-1. It was considered that this arrangement would help maintain security within divisional boundaries, which was naturally a CIC function, and would assist in maintaining law and order among the civil population, which was a natural AMG function. The similarity of coverage between AMG and CIC made this an ideal arrangment.

As soon as a commune is taken by our infantry, and in many cases separate fractions of communes, we hold a meeting with all remaining officials as well as with professional men and other leading citizens of the commune. Included in this meeting are the leaders of the Partisans and the CLN to whom we express the Commanding General's appreciation for their assistance and the hope that they will continue to assist us. We explain our respective missions, solicit their cooperation and take the necessary data requisite to the proper functioning of both AMG and CIC. We explain that the Commanding General and the Allied Military Government are responsible for the government of their people at this time and that the Partisans are to lay down their arms in order that peace may be restored once again to their people. It is recognized, however, that in all instances in which we enter a town there are either Germans in the area in hiding or Fascist enemies. Consequently, we

have taken a practical view of the problem and have permitted the Partisans, for tactical and military reasons, to retain their arms until our CP moves beyond their town. On 9 July we inspected the entire rear boundary of the LIVORNO Province accompanied by the leader of the Partisans and have found the Partisans in the rear areas disarmed and without insignia, leading fairly normal lives, yet retaining their organization which can be called into existence at a moment's notice. However, most of their arms have been taken up and they do not have access to them. We have found, though, that in communes closer to our forward CP the Partisans in many instances retain their arms in spite of the proclamation and the notices to the contrary. This should be no cause for alarm, since many of these Partisans are called upon for tactical missions with our combat troops or to make security arrests. Moreover, the armed Partisans move forward as tactical troops advance leaving merely a small skeleton policing group which lays down its arms when the Carabinieri are established.

Aid given us by Partisans can be divided into two phases: (1) Civilian; (2) Military. Under the civilian phase the Partisans, with the cooperation of the CLN, maintain an internal police force. They make security arrests and report known Fascists and suspects dangerous to the security of the division. They send squads behind our infantry or with our infantry into embattled towns to prepare the way for us. In many instances they infiltrate into the towns under cover of darkness before the infantry arrives, assist the infantry in their tactical mission, and thereafter maintain internal order. The Partisans and the CLN maintain offices in the communes and in each town, for it is a rare occasion when the regular officials are present. In short, the only government we meet as we enter newly fallen communes is the government created by the Partisans and the CLN. The Committee of Liberation selects the mayor and supplies us with the essential data. The Partisans assist with the evacuation of civilians from embattled towns; they disinfest the civilians; they bury the dead; they distribute food stores and aid in the resettlement of refugees. They assist in taking care of their own wounded and infirm by establishing and maintaining emergency infirmaries. They check on all refugees within a town for security purposes; they maintain lists of refugees so that they may be properly housed, fed, and given medical attention. While most of their work is not a highly finished type which is natural to contemplate in a well organized group, they successfully perform the services we ask.

From the military standpoint they have been of recognized assistance to our division. The Partisans are selected by us to contact their groups in territory occupied by the Germans and incidentally to gather positive intelligence for our division. They advise the forward Partisans to expect the coming of the Allied Military Government in the future and they explain our mission so that they are prepared when we arrive. The Partisans have gone forward with our tactical units as scouts and guides and many as interpreters. They maintain guerilla units in the mountains on missions apart from our own divisional

tactical mission. They maintain units for fighting in towns against the Germans. In PIOMBINO, for example, it was estimated by their leaders that as a result of a pitched battle between the Partisans and the German forces over 150 Germans were killed. As previously stated, they maintain units for the internal policing of towns newly taken by our troops and those already occupied. Their squads go forward into areas within our divisional boundary, combing the territory for hidden Germans and wanted Fascists. We have found the Partisans of GUARDISTALLO, in VADA and in RESIGNANO SOLVAY in search of Germans and Fascists. They explained they were a part of a roving squad. The Partisans are also used by our tactical units as anti-sniper squads and mopping-up squads. In CIVITAVECCHIA, for example, the Partisans were put into our infantry squads to mop up remaining German elements. The Partisans besides scouting the countryside constantly, bring to us enemy prisoners of war and return escaped Allied prisoners of war.

Limitations on aid to be expected can be outlined as follows:

a. They are not highly organized so far as delegation of power is concerned. Their leaders do most of the work.

b. They are usually poorly clothed.

c. For tactical missions they are inadequately armed and generally short in ammunition.

d. Their food supply is inadequate to maintain their organization. For example, in VENTURINA their leader explained to us on 9 July that his organization disbanded not so much for lack of arms but because they had no food source.

e. The tactical information they bring to us is often tardy. This may be due to lack of transportation facilities or communication. The lack of transportation can be said to hinder the entire organization as it now exists.

f. Most leaders of the Partisans and CLN are not accustomed to municipal administration, and though they are eager to help us and their people they grope in confusion.

g. The fact that Germans hold civilians as hostages is a deterrent to the functioning of the Partisans. For example, in MONTESCUDAIO the Germans massacred 65 civilians. We saw the dead and four cameras from G-1 section recorded the scene of the dead. The Paramount News cameraman JOHN DORED, photographed the dead, and war correspondents on the scene have a record of the same."

d. Psychological Warfare.

Major ARTHUR J. PETERSON, 34th Division Artillery.

"The division was concerned with psychological warefare through the distribution of propaganda leaflets by light artillery, British 2-inch mortars, Air OP, and patrols. Beginning shortly after the first crossing of the VOLTURNO hundreds of propaganda-filled shells were directed at enemy positions with noticeable results. A good percentage of PW's had leaflets in their possession when captured. In addition to direct appeal leaflets, a weekly

newspaper, Frontpost, for German soldiers was fired weekly. The following notes are a result of experience gained from firing various types of propaganda shells:

a. Observed fire should be used for firing propaganda shells if at all possible because variable winds in the target area make it difficult to predict the area in which leaflets will fall.

b. If it becomes necessary to fire propaganda shells using unobserved fire, the following factors, gained from observation in combat and experimental firing, may be used with a reasonable expectation of success and in any case should be considered in preparing initial data for observed fires.

(1) The difference in weight between propaganda shell and normal shell must be taken into consideration. This can be done by allowing a difference of one square for each 6/10 pound difference in weight. Usually this will work out to be minus 9 or 10 squares for 105mm shell. This appears excessive for accurate shooting but has worked out very satisfactorily in practice. Shells must be weighed at the filling point for different sized leaflets and the information given to the unit firing.

(2) Initial data for shell fuzed with M-54 fuze may be computed by applying data for normal time shell for a height of burst of 100 yards and using fuze setting from firing tables. Beyond time range fuze M-54 has been fired on impact with varying results, generally unsatisfactorily. If the angle of fall is steep enough leaflets are sometimes thrown into the air and an area about 50 yards in diameter covered. In one case the leaflets failed to separate and were thrown out in a single bundle. The M-67 fuze has proved satisfactory for long range firing and it is believed that a large percentage of propaganda shell packed should be issued with M-67 fuze. 1.5 seconds added to time of flight will give a fuze setting that will work for almost all ranges. Care must be used in setting M-67 fuze to insure good results.

9. Order of Battle.

Sergeant DAVID J. JONES, Headquarters 34th Infantry Division.

"The Order of Battle specialist spends all his working time learning about the enemy, but in the 34th Division the chief lesson learned by that earnest student concerning his methods has been the obvious one - namely, to focus all intelligence sources on himself and then to check one against another. The second most important lesson has been to realize how necessary it is, on occasion, to say 'I don't know'.

At the ANZIO Beachhead it is considered that the high degree of accuracy in the final picture showed the soundness of these statements. Starting with the information taken over from the relieved division every item which could amplify our knowledge of the enemy on our front was studied. From the first, the closest contact was kept with the photo interpreters. The offices of the two sections

adjoined and the personal friendship of the persons concerned was a great help. A cheerful yell from the photo man 'I've found two very heavy mortars!' would at once stimulate the OB man to answer (if he could), 'Yeah, I told you the 8th Company of the 956th GR just moved into that area'. If he could not give such an answer, it was up to him to find out, so he went to see his pals in the PW interrogation teams, who were frequent callers, and briefed them on the desired information against the time when the infantry caught a prisoner from the sector concerned. Radio intercepts, agent's reports, information from patrols and deserters were sifted and, by elimination, the gaps in our knowledge were established.

In the course of many conversations with G-3 personnel, missions were arranged to find the missing items, and it was during these talks that the phrase 'I don't know' came most frequently from the OB man. Finally, as the time came to prepare the plans for the breakout from ANZIO, the gaps had been narrowed. 'I don't know' had become 'I think so', and the final estimate of the final estimate of the situation was published.

Puzzles were plentiful - chiefly, that furnished by a drunkard from the 9th PGR, 26 PG Division whose statements, under interrogation, on the movement of his unit placed a question mark on the map for weeks. Yet on the strength merely of such a report it would have been highly dangerous to assume as some did, that a Panzer division had entered the line.

By good luck, the final result obtained came very near the true picture as shown in captured documents after the attack. Each statement or estimate made had some evidence to support it and guesses were plainly stated to be such.

Undoubtedly the most encouraging feature of the whole phase was that by constant swapping of information and by frank discussions with all sorts of people, for example, battalion commanders and patrol leaders, some not intelligence specialists at all, it was possible to follow-up leads and quite often, to arrive at the correct answer.

By contrast with the jig-saw puzzle method, outlined above, at TARQUINIA we had a demonstration of the sudden death method. Here, the origin was a warning from higher headquarters based on secret information, that the 20th Luftwaffe Division (a new arrival) was expected to oppose us. Within a few hours, prisoners had been taken from almost every comapny in the one regiment which was operating in our sector and the Order of Battle picture was completed solely from PW interrogation reports overnight."

CHAPTER VIII - PERSONNEL

1. The lessons presented in the previous chapters have to do with operations and technique employed in fighting the war while this final chapter has to do with the individual fighting man and his problems One of the quickest lessons learned by the individual is that continued discomfor is not a necessary requisite to gain the status of a battle-hardened combat soldier. The advantages of a feather bed in a villa over a pup-tent on the ground are soon recognized as the soldier learns to preserve himself for the period in which hardships are unavoidable.

a. Replacement Procedure.

Lieutenant Colonel HAROLD L. STIPP, Headquarters 34th Infantry Division.

"Just prior to the start of the offensive to break out of the ANZIO Beachhead an over-strength of 150 officers and 750 enlisted men was assigned to the Division in anticipation of future losses. The purpose was to determine whether this would facilitate rapid replacement of battle losses and to determine whether such a method of replacement would be more effective rather than receipt of small shipments of green recruits, with the resulting immediate utilization in combat units. The 750 enlisted men were assigned equally to each infantry regiment with instructions that they be placed mainly in rifle companies to insure battle innoculation during the defensive phase, and just prior to the opening of the offensive, instructions were issued to each regimental commander to form a replacement company. These replacement companies consisting of approximately 250 men were withdrawn to regiment rear echelons, to be held in readiness for immediate replacement of battle losses. When battle losses occurred, the regimental commander then drew upon his replacements, always maintaining the fighting strength of his regiment at or very near the authorized table of organization strength.

The extra officers, consisting of about 40 per infantry regiment, were not a part of the replacement company but were assigned to companies and actually utilized with the companies in combat. Thirty additional officers including 20 artillerymen, were assigned on the basis of 5 for a battalion; the other 10 being utilized in service elements of the Command where the need had become evident. The number of additional officers assigned to rifle companies should be 2 as a minimum with 3 preferred.

This system of employing the individual in actual combat for a short period where the type of action permits and then with-drawing him to the regimental rear echelons for utilization as loss replacements, proved extremely satisfactory and seemed to be an important advance in replacement procedure.

First, it is an invaluable aid in the training of replacements in that it provides them training and conditioning in the presence of battle itself, common to the conditions in which they will fight.

Secondly, it provides for small reserves to maintain combat strength and efficiency for several days after initiation of the attack, when it is most necessary to maintain drive and momentum.

Throughout the ANZIO Beachhead break-through and continuation of the advance to PISA, additional replacements were obtained in groups of 150 to 200 and sub-allocated to regiments, maintaining in each an over-strength of 250. It is true that in an extremely rapid advance it is more difficult to maintain replacement companies as such and one or two minor break-downs occurred in the procedure.

Through experience gained in fighting and the planning of operation of replacement companies, it is considered that a unit of a total strength of 750 enlisted men, infantry, attached to the Division, is the better plan providing the necessary overhead personnel; administration and maintenance equipment can be made available to the Division Commander. Present T/E allowances do not permit the operation and maintenance of so large a group as a separate unit. Officer personnel for training administration can be obtained from surplus assigned officers, if the practice of a surplus is to be maintained. Within this attached unit there should be 3 replacement companies - one allocated to each regiment. This provides the regimental commander with an opportunity to rotate men in a state of near exhaustion, replacing them with fresh men with a minimum amount of administrative details. It provides an opportunity to train replacement groups in those subjects which are considered most necessary for that regiment at the time; however, the unit remaining under the Division Commander's control. It also provides an opportunity for the men to become acquainted with the regiment in which they will ultimately serve."

Second Lieutenant ROBERT T. HUNTER, 135th Infantry.

"It is difficult for an officer without combat experience to take over command of a platoon in a battle wise combat experienced outfit. He is subject to his own doubts and misgivings - as well as to the doubts and misgivings of the men under him.

He may be faced with the problem of taking command of a rifle platoon in a rifle company - right in the middle of an attack. His predicament may be further complicated by the fact that all his past experience has been limited to staff positions or a Headquarters unit.

The normal tendency is to attempt to stress his ability by taking immediate initiative in the attack, an attitude of 'I'll show you all I've got what it takes'. The result is generally - one officer casualty - and frequently fatal.

Remember that no experienced combat platoon expects a "raw recruit" - and that's what he is to his men - to personally be the first man to jump out - and lead the assault of the regiment on Hill 'Umpty Ump'.

They are expecting him to be as green as he is and as scared as he is. He will be hitting the ground every time he hears a shell go over until some buck private - casually mentions "It's OK Lieutenant - those are ours going over to greet Jerry". Far better

let him - take a deep breath - swallow hard for five minutes - forget all the saluting - and eating outs and chewings - he used to be so good at back in the States - and thank the lad. Let him find out who among his non-coms have the most combat experience - and learn their secrets. Give them full [illegible] - don't be afraid to take and ask their advice. Don't try to be a world beater - the first few days - take it easy - ask a lot of questions and learn as many answers as possible. With luck on his side he may last the week out. If he lasts the week - he will have seen enough - learned enough - and done enough - in his own natural way - to carry him through - from then on indefinitely."

b. Replacement Training. Reports indicate that replacements, although improving, still are not a cross section of the men brought into the service. They frequently are in a lower AG classification test scoring bracket and do not measure up to the above average physical standard which should be a requirement for all infantry units. All too frequently this places an additional burden on platoon leaders and non-commissioned officers as men of this caliber do not always have an aggressive initiative and results in excessive casualties. In the majority of cases the only training lacking is battle experience. However an excessive minority profess ignorance in the use of certain weapons. It is the concensus of opinion of battle trained NCO's with considerable experience that men assigned to an infantry company must be able to use every weapon assigned to the company as they will be forced into a position in which they must use them sooner or later.

Staff Sergeant ANDREW O. NORDAHL JR, 133rd Infantry.

"I have found that recent replacements lack sufficient knowledge of automatic weapons. The BAR is a very important weapon and should be stressed in basic training. Most replacements don't have the slightest idea of how a rifle crack sounds when fired in his direction. German weapons should be used for this type of training so that the individual soldier can distinguish them by sound. In other words training should include more of battle drills with overhead firing.

Last but not least, they have a tendency to bunch up on the march or other formations."

Private First Class DANIEL R. BLACK, 133rd Infantry.
Private First Class GLENN B. LUKE, 133rd Infantry.

"Many of the men that come to this company have never fired the Rifle Grenade. They should be made to fire this weapon before being sent to combat units.

One thing that is very important in combat is map and compass reading. The infantry replacement does not get enough of this training.

First Lieutenant DONALD C. JOHNSON, 135th Infantry.
First Lieutenant CLIFTON R. FARNUM, 135th Infantry.

"There is not enough training given for scouting. It takes a brave quick thinking man to be a good scout. The type of men which we are receiving as replacements at present are very poor. It seems that every man that is incompetent in other type units is put in the infantry. This results in the high percentage in casualties among platoon leaders and good non-commissioned officers. The Platoon Leader has to be first scout and also lead these replacements up to a fighting position personally or they seem to disappear about the time you need them most. Half of my platoon at present has had different training than that of an infantry rifle company."

First Lieutenant ROBERT LOGEE, 133rd Infantry.

"All men in the squad should be given an opportunity in training to lead the squad. The replacement private of today is the NCO of tomorrow in combat."

c. Morale. It is believed that the word 'morale' is the most mis-used in the official language of the U.S. Army today. Actually it is far more than the U.S.O. shows, and doughnuts, the word seems to bring to mind. It is confidence in self, unit esprit, and a will to carry out orders all bound together by superior leadership. The former should be properly called -- entertainment and has its proper place as a medium to relax the individual thus simplifying the installation of a high state of morale. It is well to note that in victory, however small the engagement, morale is highest, while in defeat it is at its lowest ebb.

Second Lieutenant ROY L. HUMPHREYS JR, 135th Infantry,

"There has been a lot written about morale since the start of this war.

I've seen the effect of U.S.O. shows, mail, food, etc. These are all big items but the largest factor in combat is leadership, especially that displayed by platoon leaders and NCO's.

On the front there are innumerable difficulties such as bad weather, poor food, and long marches to mention a few. When a unit has been on the line for a long time these things grow in importance. Leaders must be on guard and must not allow their men to believe that they are getting 'a raw deal".

If the leaders can instill in their men an aggressive spirit and maintain strict discipline throughout the campaign they will find the morale of their men a lot higher when the campaign nears a conclusion."

d. Appointment, Promotion, Awards and Reclassification.

Lieutenant Colonel HAROLD L. STIPP, Headquarters 34th Infantry Division.

"Enlisted men appointed officers on the field of battle because of outstanding performance of combat duties, have proved far more

competent than replacement officers received. This is not due to lack of ability in many cases of replacement officers, but due to lack of experience which can only be gained on the battlefield. Reports indicate that men are far more willing to follow battle tried enlisted men who are commissioned, than a new replacement officer. Reported confidence in leaders gained from this source proves that fighting efficiency of the small front line elements is greatly improved. Experience within this command has proven that no battlefield appointee has ever been re-classified for inefficiency or inexperience, while this is not true of officer replacements received through normal replacement channels.

There are a number of instances in which privates, Pfc's, and the lower grade non-commissioned officers are holding down positions which call for a higher grade and that they have done so for considerable periods of time, due mainly to personnel of the proper grade being retained on the rolls of the organization while not actually present. This is believed to be due to long term hospitalization, failure to fill rotation vacancies, and personnel on temporary duty to the United States under the furlough policy. This situation creates a sense of unjustness when it occurs for a protracted period, also a sense of futility in that they perform their job under extremely hazardous conditions yet cannot obtain the reward for it. Enlisted personnel in front line elements are extremely conscious of this and it is believed that general efficiency could be promoted by establishing a system in which these vacancies could be filled in a reasonably short time.

Some reports received indicate a feeling that an insufficient number of awards and decorations are being presented to deserving personnel. A feeling has occurred that meritorious awards are rejected because of technicalities and that too many recommendations of an award are being reduced to lesser awards by the headquarters authorized to pass on these matters. This tendency is often common to the individual when not considered in the light of the whole command. It has possibly been true within this command to some extent. Extreme efforts have been exerted to overcome this feeling. More and more awards are being considered and more and more granted as time passes. It has been found necessary to inaugurate intensive selling campaigns to insure that personnel of the command observe acts of heroism and make appropriate recommendations. This campaign has resulted in many awards that would otherwise not have come to light.

In order to weld an efficient fighting unit, those who are ineffective, mediocre, non-aggressive, and without professional knowledge must be eliminated. Reports received from both officers and men have stressed this point and believe that a more liberal system of eliminating the type of officer above referred to, be inaugurated. It is further the concensus of opinion that reclassification should not be used as a punishment, which it is generally believed to be, but as a method of elimination from the position in which they cannot fill and placement in one that they are able to handle. However, it is a further opinion that they should not be given 'snap jobs' in

rear echelons and permitted the advantages of rapid promotion.

As in the case of officers a system should be established by which misfits, incompetents, those who have let down because of extremely long periods in active combat, can be reassigned to non-combatant units, eliminated from the service, or other disposition made of them, upon a recommendation of unit commanders concerned. This will insure a maximum efficiency in the front lines, creating greater drive and follow-through, resulting in the taking of objectives with less casualties. This has long been a fault in combat elements in which no adequate answer has yet been found and about which there is constant complaint and criticism."

F I N I S